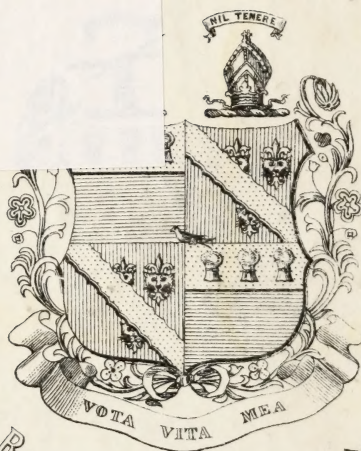


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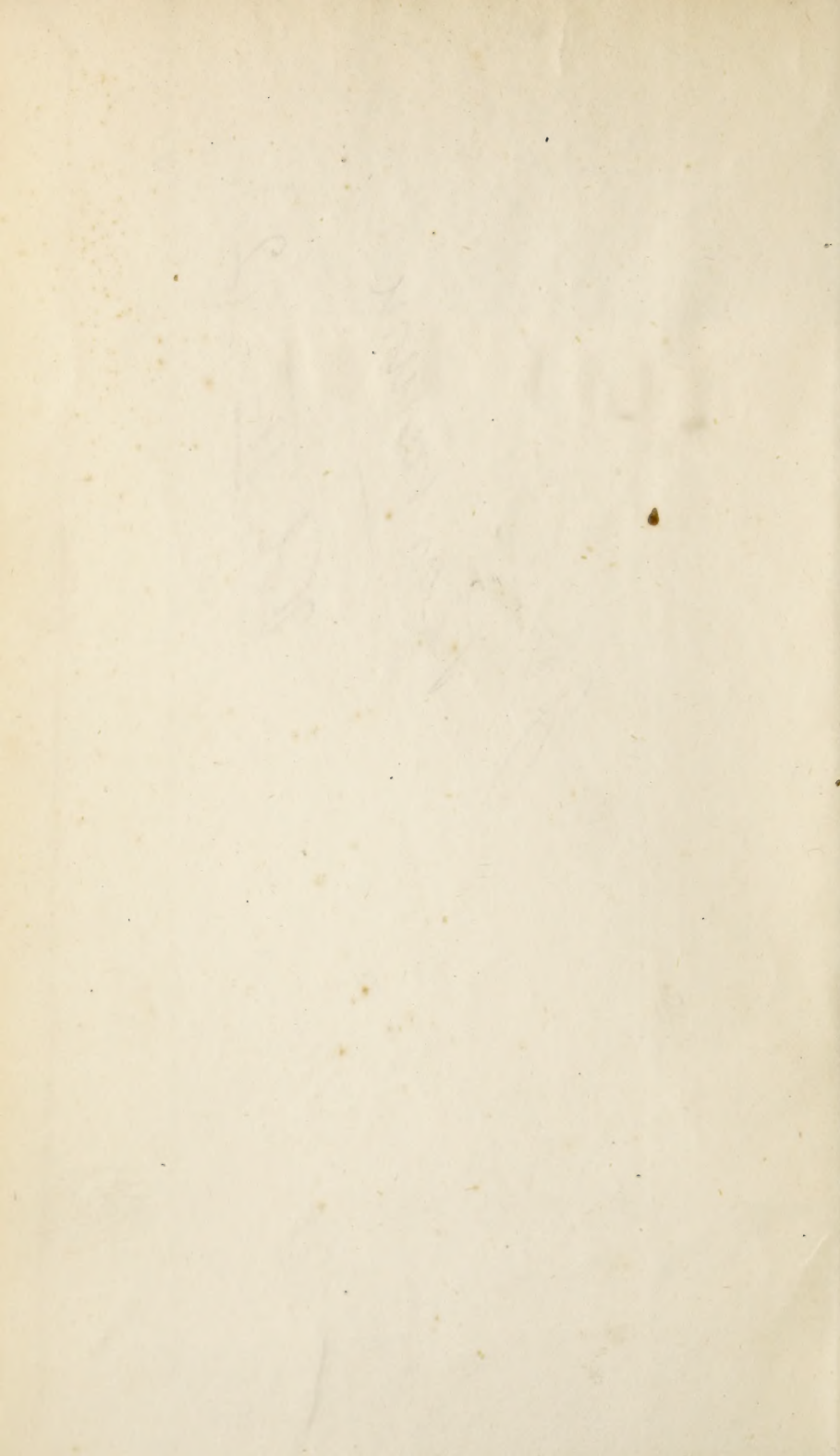
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James Bonbarum

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TAB. DI.

SERIS POLYMORPHA. Less.

Scapo subsimplici subaphyllo, foliis radicalibus oblongo-lanceolatis obtusis apiculatis utrinque lanuginosis reticulato-venosis integerrimis basi attenuatis, invol. squamis linearibus acuminatis dense lanuginosis, capitulo radiato.

Seris polymorpha. Less. in *Linnæa*, 5. p. 253. *Syn.* p. 99. DC. *Prodr.* 7. p. 19. *Gardn. Herb. Bras.* n. 4956.

Onoseris brevifolia. Don, *Trans. Linn. Soc.* 16. p. 246. ex Less. HAB. In upland sandy Campos, on the Serro do Frio, Diamond district, Brazil. Aug. 1840.

Herba pedalis. *Radix* usque ad collum lignosa. *Caulis* erectus, simplex vel ramosus, supra medium folia alterna bracteiformia gerens. *Folia* radicalia oblongo-lanceolata, obtusa, apiculata, utrinque lanuginosa, reticulato-venosa, integerrima, basi attenuata. *Capitula* multiflora. *Invol.* squamæ pluriseriales lineari-acuminatæ, extus lanuginosæ; interiores longiores. *Receptaculum* nudum. *Flor.* disci hermaphroditi, radii fœminei. *Flor. hermaph.* regulares quinquefidi, lobis revolutis: fœm. bilabiati vel aliquando ligulati. *Antheræ disci* caudibus laceratis; *radii* abortivæ, distinctæ: *Filamenta* glabra. *Stylus* glaber, ramis erectis obtusis. *Achenium* oblongum, erostre, dense villosum. *Pappus* uniserialis, setaceus, scaber.

This is a truly polymorphous plant, varying very much in the shape and size of its leaves, in the stem being simple or branched, and in the florets of the ray being either ligulate or bilobiate.—G. Gardner.

Fig. 1. Floret of the disk. *f.* 2. Anthers from the same. *f.* 3. Floret of the ray. *f.* 4. Hairs of the pappus:—*magnified.*

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LAVOISIERA LYCOPODIOIDES. *Gardn.*

Fruticosa dichotoma glaberrima, ramis teretibus adscendentibus subradicantibus, foliis sessilibus quadrifariam imbricatis ovatis obtusis supra medium subserratis uninerviis venis lateralibus subobsoletis, floribus terminalibus solitariis sessilibus, calycis fusco-punctati tubo turbinato lobis 5 ovatis æqualibus, antheris 10 dissimilibus.

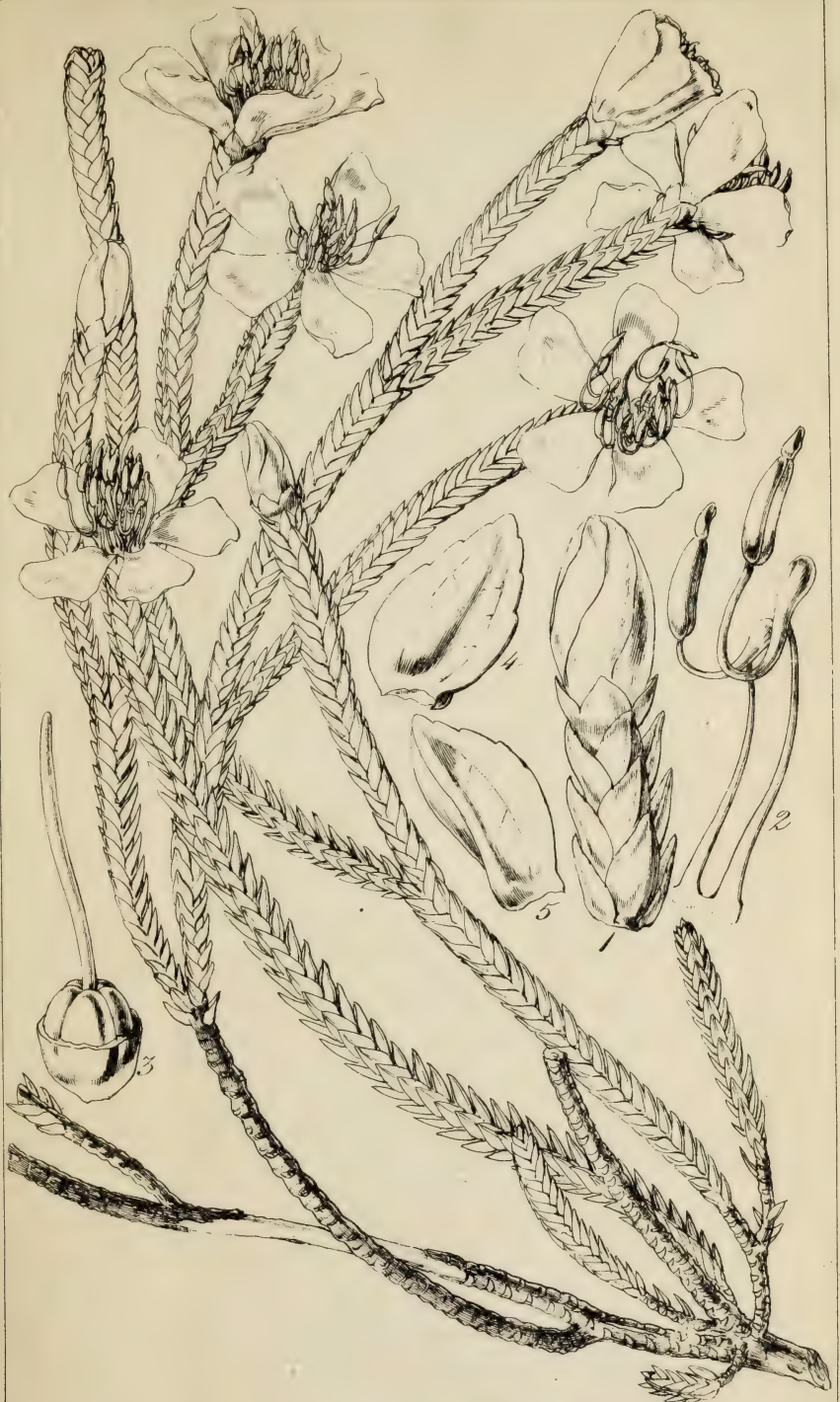
Lavoisiera lycopodioides. *Gardn. Herb. Bras. n. 4577.*

HAB. In bare elevated rocky places, Serro do Frio, Province of Minas Geraes, Brazil. Aug. 1840.

Frutex parvulus. *Rami* dichotomi, teretes, adscendentes, subradicantes. *Folia* sessilia, quadrifariam imbricata, ovata, obtusa, supra medium subserrata, uninervia, venis lateralibus subobsoletis. *Flores* terminales, solitarii, sessiles. *Calycis* *tubus* turbinatus, limbo 5-lobo, lobis ovatis obtusis, demum deciduis. *Petala* 5, obovata, ampla, rosea. *Stamina* 10, inæqualia. *Antheræ* oblongæ, brevi-rostratæ, uniporosæ. *Stylus* filiformis. *Stigma* obtusum. *Ovarium* supra medium liberum, glabrum. *Capsula* 5-locularis, apice dehiscens. *Semina* angulata. *Testa* eleganter pellucido-punctata.

This most beautiful little shrub trails along the ground among a small species of *Vellozia*, and those portions of it which are not in flower resemble very much some of the larger kinds of *Lycopodium*. It does not agree with the characters of any of the species enumerated in De Candolle's *Prodromus*; but, judging from the description, it comes nearest to his *L. Itambana*.—*G. Gardner.*

Fig. 1. Apex of a branch with a flower-bud. *f. 2.* Two of the stamens. *f. 3.* Pistil. *f. 4. 5.* Leaves:—*magnified.*



TAB. DIII.

ADIANTUM FILIFORME. *Gardn.*

Frondibus pinnatis, pinnis distantibus glabris subdimidiatis basi cuneatis fertilibus apice incis, laciniis integris, sterilibus spinuloso-dentatis, indusiis lævibus, rachi glabra apice elongata nuda demum radicante.

Adiantum filiforme. *Gardn. Herb. Bras. n. 2391.*

HAB. In shady clefts of sandstone rocks near the city of Oeiras, Province of Piauh, Brazil. April 1839.

Frondes fasciculatæ. *Stipes* subpollicaris, atropurpureus, teres, nitidus, subpaleaceus. *Rachis* teres, filiformis, glabra, nitida, apice elongata, nuda, extremitate demum radicante. *Frons* 6-8-pollicaris, pinnata. *Pinnæ* distantes, 4-5 lin. longæ, alternæ, petiolatæ, obovatæ, subdimidiatæ, basi cuneatæ, apice vel incisæ laciniis integris soriferis, vel spinuloso-dentatæ laciniis sterilibus. *Venæ* flabellatæ, pluries furcatæ, venulis parallelis. *Sori* marginales, subrotundi. *Indusia* subrotunda, membranacea, glabra.—*G. Gardner.*

Fig. 1. Fertile pinna :—*magnified.*





TAB. DIV.

ADIANTUM SINUOSUM. *Gardn.*

Fronde tripartita, ramis pinnatis vel rariter lateralibus bipinnatis, pinnis magnis oblongis obtusis vel suborbicularibus dimidiatis petiolatis margine superiore inciso-lobatis, laciniis late sinuoso-emarginatis, soris reniformibus, indusiis glabris, stipite rachibusque nitidis glabris.

Adiantum sinuosum. *Gardn. Herb. Bras. n.* 3552.

HAB. In dry rocky places near the summit of the Serra de Natividade, Province of Goyaz, Brazil. January, 1840.

Frondes fasciculatæ. *Stipes* 6-8 pollicaris, semiteres, aterrimus, nitidissimus, glaber, basi pilis paleaceis rufis obtectis. *Rachis* teres, glabra, nitida. *Frons* 1-1½- pedalis, tripartita, ramis pinnatis, vel rariter lateralibus bipinnatis, ramo intermedio majore. *Pinnæ* magnæ, sesquipollicem et ultra longæ, pollicem circiter latæ, petiolatæ, oblongæ, vel juniores suborbiculares, dimidiatæ, margine superiore inciso-lobatæ, laciniis late sinuoso-emarginatæ. *Venæ* eleganter flabellatæ, pluries furcatæ, venulis parallelis. *Sori* marginali, reniformes. *Indusia* reniformia, membranaceo-fusca, glabra.—*G. Gardner.*

Fig. 1. Fertile lacinia of a pinna :—*magnified.*



TABS. DV—DVI.

UTRICULARIA NELUMBIFOLIA. *Gardn.*

Caule horizontali radicante, foliis magnis longe petiolatis subconcavis reticulato-venosis, scapo multifloro, corolla amplissima, labio inferiore obscure trilobo, calcare descendente conico incurvo acuto labio inferiore subæquali.

Utricularia nelumbifolia. *Gardn. Herb. Bras. n.* 5839.

HAB. In the water which collects within the leaves of a large species of *Tillandsia*, growing abundantly on an arid rocky part of the Organ Mountains, at an elevation of about 5000 feet above the level of the sea. March 1841.

Caulis demersus, horizontalis, crassitie circiter pennæ corvinæ, radicans, sarmentosus. *Radices* fibrillosæ, vesiculiferæ; vesiculis pedicellatis, majusculis, subrotundis, margine inferiore pilis 2 gerentibus. *Folia* solitaria, erecta, longe petiolata, rotundata, peltata, subconcava, eleganter venoso-reticulata, diametro 3-3½ pollicaria. *Petioles* 10-14-pollicares longi, basi sarmentacei. *Scapus* 2-2½-pedalis, bisquamosus, squamis 2 valde distantibus, circiter 2-3 lin. longis, angustis, lanceolatis, acutis. *Racemus* terminalis, simplex, 4-8 poll. longus, floribus 6-9 subsecundis remotis, bracteatis. *Bractea* caulina ad basin cujusvis pedicelli, profunde 3-partita; divisuris inæqualibus, nervosis, intermedia circiter 3-lin. longa. *Pedicelli* 10-12-lin. longi, nudi. *Calyx* 2-phyllus, æqualis, circiter 7-lin. longus; foliolis ovatis, obtusis, integerrimis, patentissimis, demum erectis. *Corolla* amplissima, circiter sesquipollicaris, violacea; *labium superius* obtusum, integrum; *inferius* obscure trilobum: *calcar* labium inferius subæquans, descendens, conicum, acutum, apice sursum curvatum. *Stylus* brevis, apice infundibuliformis. *Ovarium* ovatum.

This is by far the finest, largest, and most remarkable species of *Utricularia* which has yet been detected in Brazil; besides by the ordinary method of seed, it propagates itself by runners, which it throws out from the base of the scape. This runner is always found directing itself towards the nearest *Tillandsia*, where it inserts its point into the water which accumulates between the bottoms of the leaves, and gives origin to a new plant, which, in its turn, sends out another shoot. In this manner I have seen not less than six plants united to each other.—G. Gardner.





TAB. DVII.

CASSEBEERA GLEICHENIOIDES. *Gardn.*

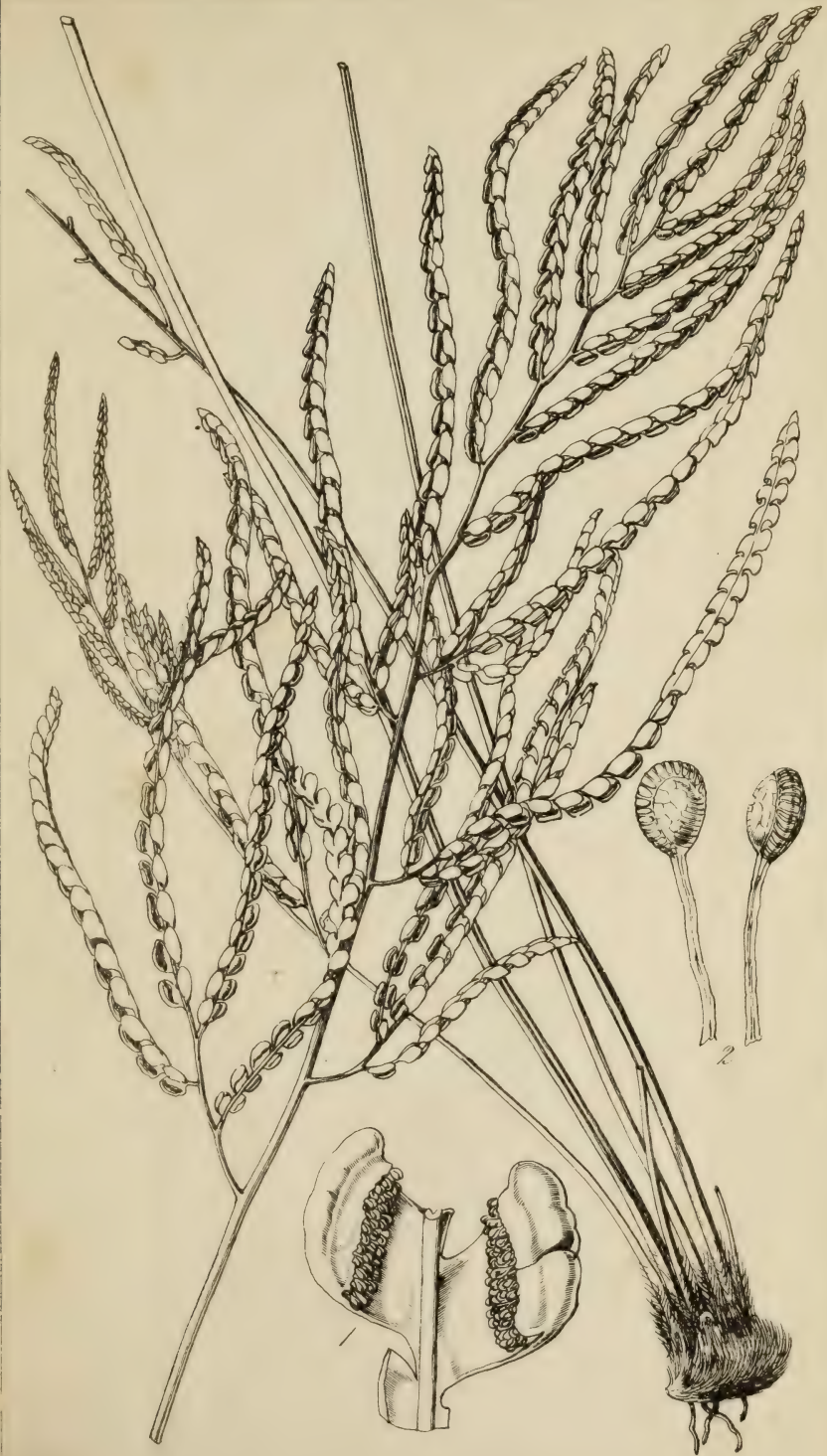
Frondebis bipinnatis, pinnis linearibus elongatis profunde pinnatifidis, laciniis brevibus oblongis coriaceis reflexis margine integris, stipite rachibusque glabris.

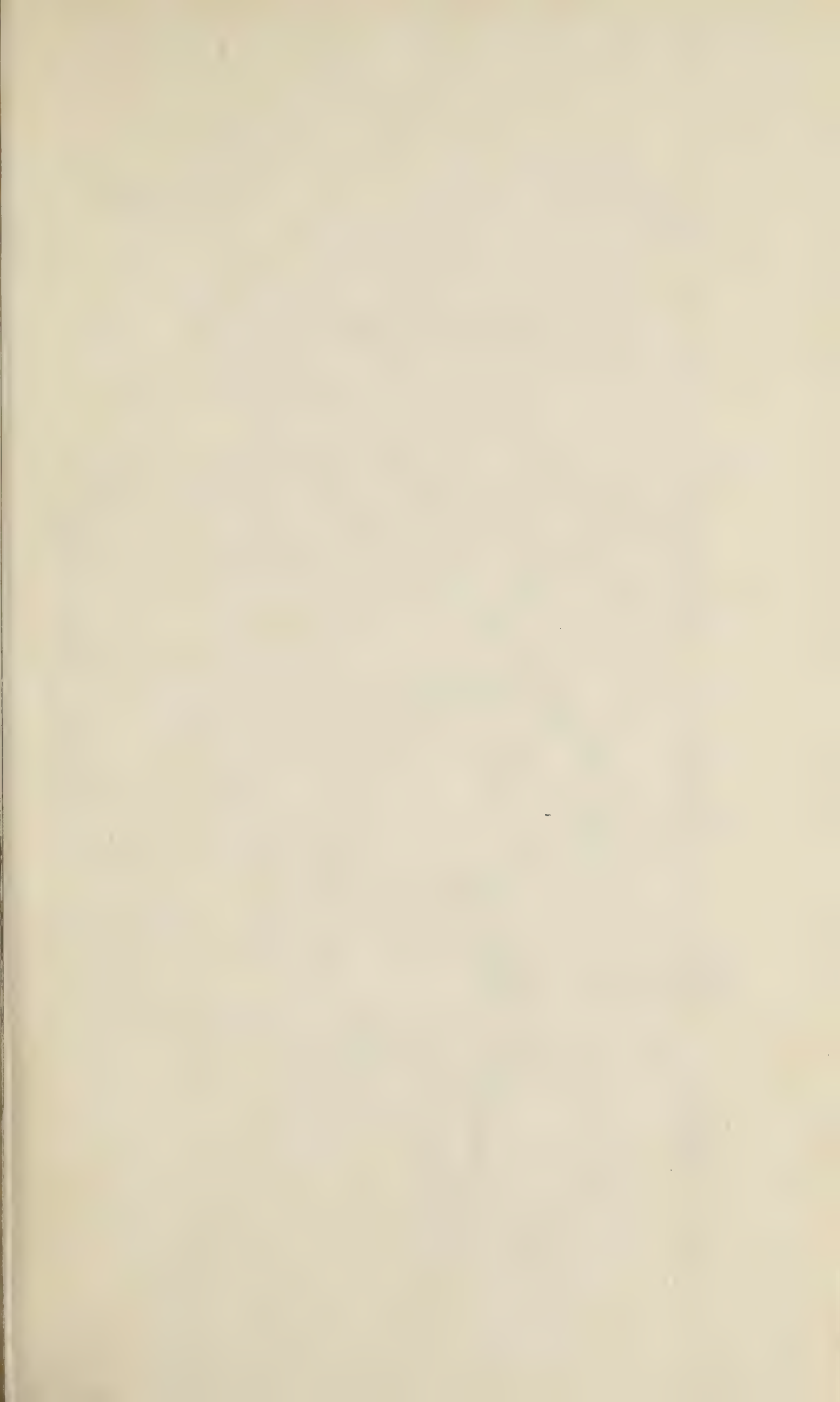
Cassebeera gleichenioides. *Gardn. Herb. Bras. n. 5295.*

HAB. In bushy rocky places near Cidade Diamantina, the capital of the Diamond district, Brazil. August 1840.

Rhizoma repens, paleis fuscis obtectum. *Frondes* fasciculatæ. *Stipes* 6-8-pollicaris, semiteres, canaliculatus, atro-fuscus, glaber, basi paleis paucis instructus. *Frons* pedalis et ultra, bipinnata. *Pinnæ* lineares, elongatæ, profundè pinnatifidæ, laciniis brevibus obtusis, oblongis, coriaceis, reflexis, marginibus integris. *Venæ* internæ, pinnatæ, furcatæ. *Sorus* solitarius, oblongus, marginalis. *Indusium* oblongum, membranaceum.—*G. Gardner.*

Fig. 1. Fertile pinna. *f. 2.* Capsules :—*magnified.*





TAB. DVIII.

PHYSOSIPHON LODDIGESII.

Folio lineari-oblongo obtuso basi attenuato spica spirali laxa duplo brevior, calycis laciniis ovatis acutis patentibus tubo trigono triplo brevioribus, petalis oblongo-cuneatis, labello trilobo disco tuberculato lobis rotundatis intermedio crenulato.

Physosiphon Loddigesii. Lindl. in Bot. Reg. sub tab. 1797.

Stelis tubata. Lodd. Bot. Cab. t. 1601.

Our drawing was made from the living plant in the stove of the Royal Botanical Gardens of Kew. It is indeed already figured in Loddiges' Botanical Cabinet; but no dissections are given. The following is the character of the genus, as given by Dr. Lindley. *Calyx* tubulosus basi ventricosus, apice trifidus. *Petala* in fundo calycis, carnosæ, nana. *Labellum* et *Columna* *Stelidis*. *Pollinia* 2, sphærica.—Herbæ *epiphytæ habitu* *Pleurothallidis*;—and the species given are, besides the above, *P. emarginata* (*Pleurothallis emarginata*, Lindl. Gen. et. sp. Orchid, p. 6.) and *P. spiralis*, Lindl. in Bot. Reg. l. c.

Physosiphon Loddigesii was discovered at Xalapa, Mexico, by M. Deppe, a German botanist and traveller, well-known by his researches in Mexico.

Fig. 1. Flower. f. 2. The same, the tubular calyx being removed. f. 3. Pollen-masses :—*magnified*.



TAB. DIX.

GRAMMITIS (CHEILOPTERIS) ORGANENSIS. *Gardn.*

Frondibus linearibus elongatis obtusis profunde crenato-serratis basi attenuatis glabris, soris obliquis oblongis, stipitibus pilosiusculis.

Grammitis Organensis. *Gardn. Herb. Bras. n. 5913.*

HAB. On rocks and on the stems of small trees, in a ravine near the summit of the Organ Mountains, Brazil. March 1841.

Frondes fasciculatæ, 6-8-pollicares, lineares, obtusæ, glabræ, profunde crenato-serratæ, basi attenuatæ. *Stipites* pilosi. *Venæ* internæ, furcatæ, venulis apice clavatis, superiore fructifera. *Sori* oblongi, obliqui. *Receptaculum* pilosum. *Indusium* nullum.

This elegant and well marked species of *Grammitis* belongs to Presl's second division of the genus, and is easily distinguished from the other species which that section contains, by its deeply crenato-serrated fronds.—*G. Gardner.*

Fig. 1. Fertile lacinia; one with the sorus removed. *f. 2.* Capsule. *f. 3.* Sporules:—*magnified.*



TAB. DX.

PÆPALANTHUS DISTICHOPHYLLUS. *Martius.*

Caulibus erectis strictis ramisque dense foliosis, foliis bifariam imbricatis lanceolatis acutis cum mucrone concavis ciliatis, pedunculis solitariis lateralibus, capitulis hemisphericis vaginis subtruncatis mucronatis.

Pæpalanthus distichophyllus. *Mart. in nov. act. Acad. Nat. Cur.* xvii. t. 23. *Kunth, Enum. Plant.* 3, p. 518. *Gardn. Herb. Bras. n.* 5259.

HAB. In moist, sandy, bushy places, on mountains near Cidade Diamantina, the capital of the Diamond district, Brazil. July, 1840. On the Serra de Itambé. *Martius.*

Herbaceus. *Caulis* erectus, ramosus, foliosus, bipedalis. *Folia* dense bifariam imbricata, concava, lanceolata, acuta, mucronata, glabra, margine ciliata. *Pedunculi* laterales, solitarii, tenues, glabri, 6-8-pollicares. *Vaginæ* glabræ, apice scariosæ, 10-14-lineas longæ. *Capitula* hemispherica, albo-villosa. *Bractee* involucrantes steriles obovato-oblongæ, obtusæ, mucronatæ, glabræ; *bractee* flores stipantes oblongæ, obtusæ, apicem versus pilis albis dense ciliatæ. *Receptaculum* glabrum. *Flores masculi* cum fœmineis mixti, pedicellati: *sepala exteriora* oblonga, obtusa, apice pilis ut in bracteis vestita; *interiora* in tubum obconicum, apice trilobum connata. *Stamina* 3. *Antheræ* flavæ. *Flores fœminei* sessiles: *sepala* 3 exteriora obovata, obtusa, apice pilorum fasciculo vestita; 3 interiora minora, pilosissima. *Stylus* generis. *Stigmata* 3, simplicia.

My specimens agree, in every respect, with the description given by Martius, except in the leaves, which he states to be rather obtuse, while here they are certainly acute.—*G. Gardner.*

Fig. 1. Capitulum. *f. 2.* Male flower. *f. 3.* Female flower. *f. 4.* The same with the bractea laid open:—*magnified.*





TAB. DXI.

LUPINUS ARENARIUS. *Gardn.*

Suffruticosus erectus ramosus, molliter et adpresse sericeo-villosus, foliis exstipulatis petiolatis integris oblongis elliptisve utrinque obtusis, floribus dense spicatis, calycis bibracteati labio superiore profunde bifido, inferiore breviter 3-dentato, legumine dense adpresse sericeo-villoso.

Lupinus arenarius. *Gardn. Herb. Bras. n. 4500.*

HAB. In elevated sandy campos; on a mountain tract to the north of the Diamond district, Brazil. July, 1840.

This beautiful species of Lupine, which grows about two feet high, covers large tracts in its native country, and is very conspicuous from its long spikes of blue flowers. It is nearly related to *L. velutinus* (*Benth. in Ann. Nat. Hist. 3, p. 430*), but differs in the shape of the leaves, in having no stipules, and by the lower lip of the calyx being trifid. Another species in my collection, also allied to it, may be thus characterized:—

Lupinus attenuatus; suffruticosus erectus ramosus, foliis exstipulatis petiolatis integris lineari-oblongis obtusis mucronatis basi longe attenuatis utrinque villosis valde nervosis nitidis, floribus dense spicatis, calycis bibracteolati lobo superiore bifido inferiore integro.

Lupinus attenuatus. *Gard. Herb. Bras. n. 4501.*

HAB. Rare in mountain tracts, in the Diamond district, Brazil, and on the Serro do Frio. July, 1840.

This species comes very near *L. coriaceus* (*Benth. in loc. cit.*) and may only be a villous variety; but I have not had an opportunity of comparing my specimen with Mr. Bentham's, which was collected near Tijuco, by Vauthier.—*G. Gardner.*

Fig. 1. Calyx and Pistil:—magnified.





TAB. DXII.

PÆPALANTHUS SPECIOSUS. *Gardn.*

Caule ramoso dense folioso, foliis caulinis semiamplexicaulibus erecto-patentibus lanceolato-acuminatis cuspidatis extus pilosiusculis intus glabris margine junioribus præsertim ciliatis, pedunculis hirsutis, vaginis glabris profunde bifidis apice subciliatis.

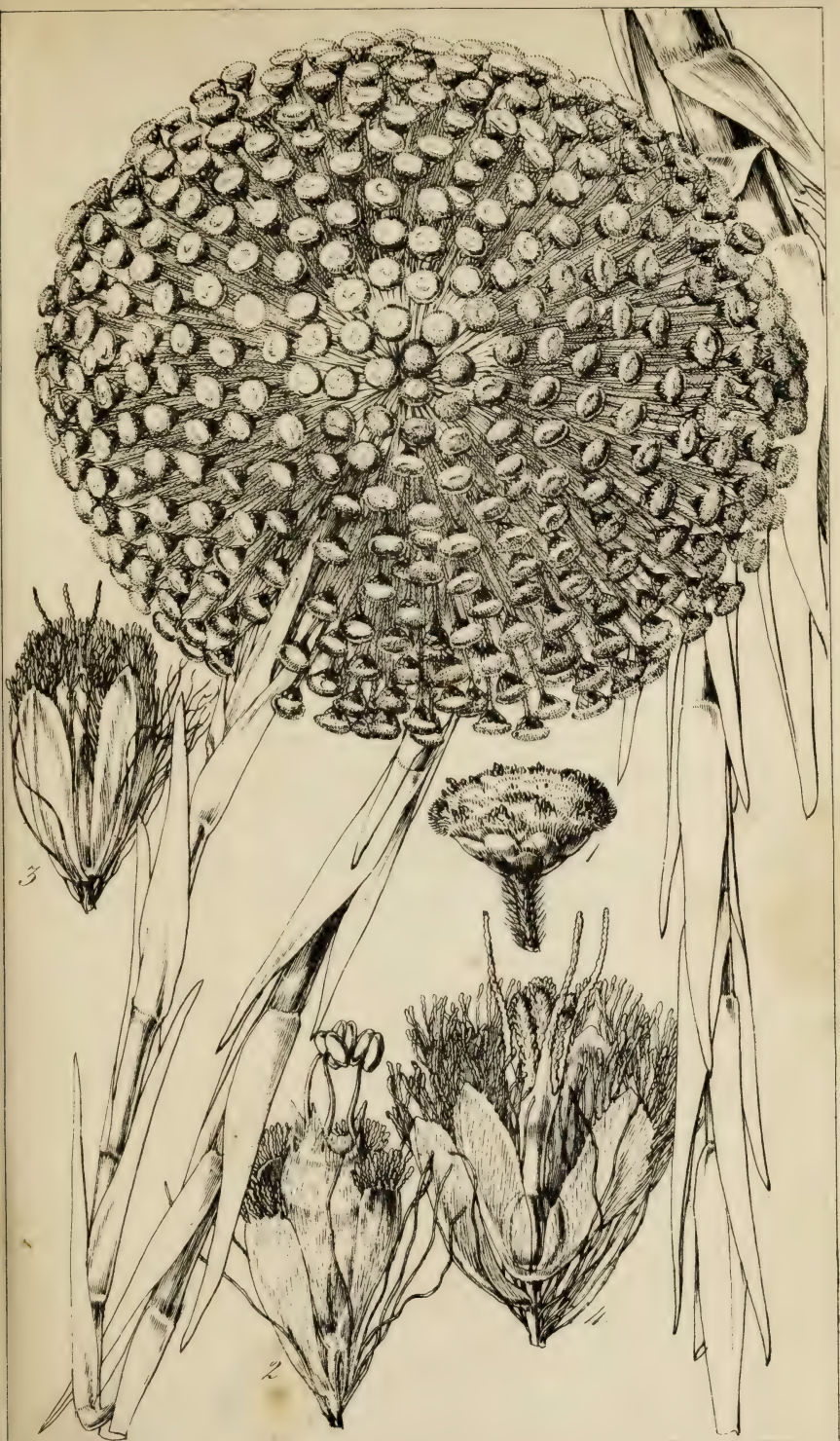
Pæpalanthus speciosus. *Gardn. Herb. Bras. n.* 5244.

HAB. On rocky mountain declivities, to the north of the Diamond district, Brazil. July 1840.

Suffrutex 4-5-pedalis, ramosus, dense foliosus, ad insertiones foliorum pilosus. *Folia* basi dilatata caulem semiamplectentia, erecto-patentia, lanceolato-acuminata, cuspidata, striata, supra concava glabra, subtus convexa pilosiuscula, juniora præsertim margine pilis albis ciliata, 2-3 pollicaria. *Pedunculi* creberrimi, circiter 300, umbellati, æquales, 2-pollicares, hirsuti. *Vaginæ* glabræ, bifidæ, apice subciliatæ. *Capitula* hemispherica, albolanata, magnitudine seminis piperis nigri. *Bracteæ* involucentes steriles, breves, obovato-oblongæ, ciliatæ; *bracteæ* flores stipantes oblongæ, obtusæ, apice ciliatæ. *Receptaculum* pilosum. *Flores masculi* et fœminei mixti; illi pedicellati: *sepala* 3 exteriora oblonga, obtusa, ad apicem pilosa: 3 interiora in tubum obconicum apice trilobum concreta, acuta. *Antheræ* subrotundæ, flavæ. *Flores fœminei* sessiles: *sepala* 3 exteriora, oblonga, obtusa, ad apicem pilosa; 3 interiora exterioribus simillima. *Pistillum* generis. *Stigmata* 3, filiformia, simplicia.

This, which is by far the finest species of the now numerous tribe to which it belongs, is often five feet high, and thickly branched down to the ground, each branch bearing a large yellowish ball-shaped umbel at its extremity. It is easily distinguished, at first sight, from *P. Maximiliana*, Kunth, by its shorter peduncles, and more slender habit.—*G. Gardner.*

Fig. 1. Head of flowers. *f.* 2. Male flower. *f.* 3. Female flower. *f.* 4. The same more expanded:—*magnified.*





TAB. DXIII.

SISYRINCHIUM INCURVATUM. *Gardn.*

Caule erecto simplici subflexuoso latissime ancipiti-alato folioso, foliis ensiformibus falcatis apice obtusiusculis incurvatis alisque tenuistriatis, spatha diphylla terminali, pedunculis 2-3 aggregatis, perianthio glabro luteo, capsulis globosis.

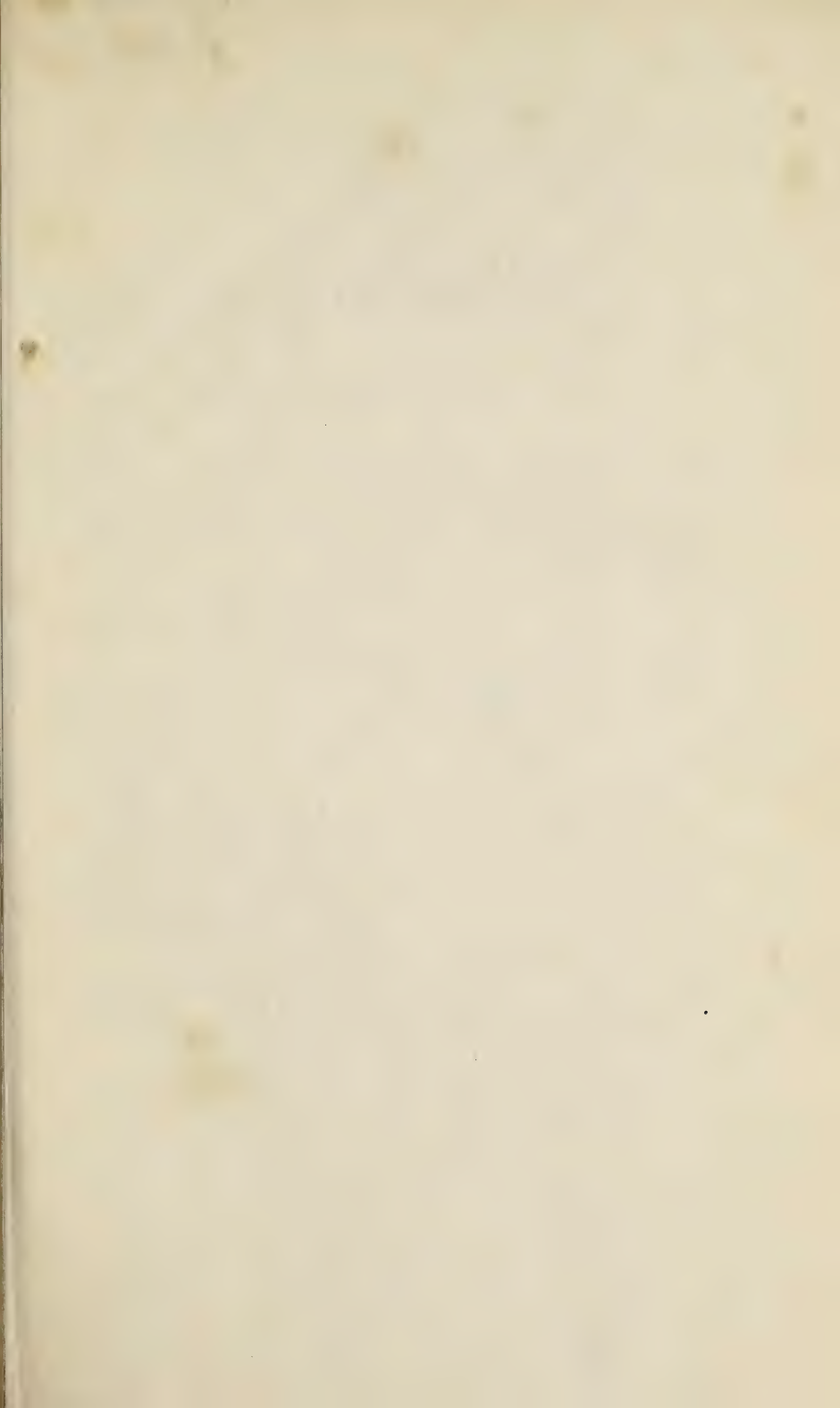
Sisyrinchium incurvatum. *Gard. Herb. Bras. n.* 5890.

HAB. In open grassy places, near the summit of the Organ Mountains, Brazil. March, 1840.

Caulis erectus, pedalis et ultra, subflexuosus, simplex, utrinque lato-alatus, foliosus. *Folia* vix bipollicaria, 5-6-lin. lata, ensiformia, basi equitantia, subfalcata, acutiuscula, incurvata, striata. *Spatha* diphylla, bracteis foliiformibus. *Pedunculi* 2-3 ex eâdam spathâ. *Germen* inferum, globosum. *Perianthii* laciniae 6, obovatæ, glabræ, flavæ. *Capsula* globosa, erecta.

This species has very much the habit and appearance of *S. alatum*, Hook. (Tab. 219 of this work), also found by me on the Organ Mountains; but differs in its more robust habit, broader, more obtuse, and more incurved leaves, and globose capsule.—*G. Gardner.*





TAB. DXIV.

ESCALLONIA ORGANENSIS. *Gardn.*

Glabra, ramis erectis, foliis oblongis obtusis basi cuneatis breviter petiolatis supra medium serrulatis leviter resinoso-punctatis, paniculis terminalibus multifloris, calycis tubo puberuli, lobis subulatis, petalis spathulatis.

Escallonia Organensis. *Gardn. Herb. Bras. n. 5720.*

HAB. In clefts of rocks and shallow ravines, near the summit of the Organ Mountains, Brazil. March, 1841.

Frutex ramosus, 2-4-pedalis. *Folia* alterna, breviter petiolata, oblonga, obtusa, basi cuneata, apicem versus serrulata, leviter resinoso-punctata, glabra. *Panicula* terminalis, conferta, multiflora. *Pedunculi* 6 lin. longi, puberuli, sub-triflori. *Pedicelli* pedunculo subæquales, basi bracteati. *Bracteæ* subulatæ, circiter 3 lin. longæ. *Calyx* puberulus; *tubus* hemisphericus, adnatus; *limbus* 5-partitus; laciniis subulatis. *Petala* 5, rosea, spathulata, conniventia, apice tantum patentia. *Stamina* 5. *Antheræ* oblongæ. *Ovarium* adnatum, obconicum, biloculare, multiovulatum. *Stylus* filiformis, persistens, fructu duplo longior. *Stigma* peltatum.

As a species this will range along with *Escallonia Sellowiana*, and *E. Monte-Vidensis*, both of which are also from the South of Brazil.—*G. Gardner.*

Fig. 1. Flower. *f. 2.* The same, from which the petals are removed :—*magnified.*





TAB. DXV.

MOURIRIA ARBOREA. *Gardn.*

Foliis elliptico-oblongis petiolatis longe acuminatis coriaceis glabris impunctatis venis marginalibus distinctis reliquis tenuibus subobsoletis, umbellis axillaribus pauci-2-3-floris, pedicellis calyce longioribus, antheræ calcare elongato.

Mouriria arborea. Gardn. Herb. Bras. n. 5704.

HAB. Rare in virgin forests at an elevation of about 3,000 feet, on the Organ Mountains, Brazil. March, 1841.

Arbor circiter 40 pedalis, ramosa. *Rami* dichotomi, ad insertiones foliorum incrassati, teretes, cinerei. *Folia* opposita, petiolata, elliptico-oblonga, longe acuminata, glaberrima, integerrima, coriacea, 3-4-poll. longa, 18-20-lin. lata, venosa, venis lateralibus submarginalibus distinctis, reliquis subobsoletis, costa centrali supra plana, infra canaliculata: color intense viridis, subtus pallidior. *Pedunculi* semiunciales, simplices, axillares, fasciculati, cum bracteis duabus oppositis supra medium ad articulum insertis; *bracteis* brevibus triangularibus, coriaceis, reflexis. *Calyx* coriaceus; tubo hemispherico, basi cum ovario adnato; limbo inæqualiter ab apice usque ad medium rumpente. *Petala* 5, ad marginem tubi calycis inserta, luteo-alba, ovata, acuminata, marginibus undulatis. *Stamina* 10, in marginem calycis tubi inserta, 5 petalis opposita, 5 alterna. *Filamenta* petalis vix longiora. *Antheræ* oblongæ, flavæ, basi incurvatæ, biloculares, apice poris duobus dehiscentes. *Ovarium* basi calycis adnatum, 5-loculare; loculis 4-6-ovulatis, ovulis erectis. *Stylus* filiformis, curvatus. *Stigma* simplex, truncatum. *Fructus* ignotus.

The plant which has been described by De Candolle, under the name of *Olisbea rhizophoræfolia*, and by Hooker *Guildingia pisidoides*, is a true *Mouriria*, and it is to it that the present species is most nearly related. My herbarium still contains some four or five undescribed Brazilian species of this genus.—*G. Gardner.*

Fig. 1, 2. Flowers. f. 3. stamens:—magnified.



TAB. DXVI.

LUXEMBURGIA CILIOSA. *Gardn.*

Foliis confertis longe petiolatis oblongis obtusis setosis basi acutis glanduloso-serratis ciliosis, racemis terminalibus corymbosis multifloris, floribus polyandris.

Luxemburgia ciliosa, *Gardn. Herb. Bras. n. 5677*. *Plectandra ciliosa*, *Mart. Nov. Gen. I, p. 40*.

HAB. In rather moist peaty soil, in open places, along with *Andromedas*, at an elevation of about 5,000 feet on the Organ Mountains, Brazil. March, 1841. Minas Novas, *Martius*.

Frutex pulcherrimus, glaber, 8-12-pedalis. *Rami* teretes. *Folia* alterna, longe petiolata, oblonga, obtusa, setosa, basi acuta, glanduloso-serrata, ciliosa, elongata, penninervia, nitida, $2\frac{1}{2}$ -3 poll. longa, 10-12 lin. lata: *petioli* graciles, $1\frac{1}{2}$ poll. longi. *Stipule* ciliatæ, caducæ. *Racemi* terminales, corymbosi, multiflori. *Pedicelli* graciles, $1\frac{1}{2}$ circiter lin. longi, infra medium articulati. *Calyx* 5-sepalus; sepalis inæqualibus, oblongis, acutis, deciduis. *Corolla* hypogyna, 5-petala; petalis obovatis, obtusis, luteis. *Stamina* hypogyna, plurima. *Antheræ* subsessiles, extrorsæ, lineares, tetragonæ, in massam concavam secundam coalitæ, deciduæ, apice biporosæ. *Ovarium* trigonum. *Stylus* subulatus, incurvus. *Stigma* simplex. *Capsula* trigona, unilocularis, trivalvis, valvarum marginibus introflexis seminiferis. *Semina* plurima, margine hinc et ad apicem alato.

This shrub is, perhaps, one of the most beautiful which I met with in Brazil. Its elegant light-green shining foliage, and its large corymbs of yellow flowers, would make it a most desirable plant for cultivation in this country: and I am happy to say, that it has been raised both at Kew and Glasgow, from seeds brought home by me. The structure of the margin of the leaf is rather curious. The cilia and the glandular serratures are quite distinct from each other; the latter taking their origin from an union of the primary veins with one which surrounds the leaf, while the former arise from the inosculation of a small primary vein with the lateral branches of the larger ones.—*G. Gardner*.

Fig. 1. Flower. *f. 2.* Section of the ovary. *f. 3.* Portion of a leaf:—*magnified*.







TABS. DXVII.—DXVIII.

THAUMASIA? CUNNINGHAMI.

GEN. CHAR. *Frons* membranacea sordide rubra, costis corneis, rigidis articulatis reticulatis percursa. *Endl. N.* 103.

Thaumasia Cunninghami; fronde corneâ ramosissimâ, ramis alternis alatis hic illic anastomosantibus, ramulis bifidis spinæformibus patentibus marginatis, axillis rotundatis.

HAB. On the shores of New Zealand. *Allan Cunningham, Esq. in Herb. Heward.*

Fronde 12-14 inches long, divided from the base in an irregular manner, into several principal branches, whose lesser divisions anastomose together. The branches are furnished with a cylindrical midrib, composed of a very dense, horny, semi-transparent substance, perfectly continuous, and scarcely exhibiting a cellular structure to the microscope, but apparently composed of concentric layers of glue. The margin, or frond, is of a much thinner and more gelatinous composition, but seems to be of similar structure. Here and there an areole, formed by the anastomosing branches, is filled up by this membrane. This production is one of those anomalous ones that it is difficult to find an appropriate place for in the system; and I am doubtful if it can be consistently referred to *Thaumasia*, though it appears to approach that equally doubtful genus, more nearly than to any other. There is one principal difference, however:—the skeleton is inarticulate. The European genus, *Alcyonidium*, does not appear to be far removed; and the reasons which induced me in the *British Flora* to reject that genus from the Vegetable Kingdom, apply with equal force to our present subject.—*W. H. Harvey.*

Fig. 1. Portion of the plant:—*magnified.*





TABS. DXIX.—DXX.

BOWMANIA VERBASCIFOLIA. *Gardn.*

Bowmania verbascifolia. *Gard. in Hook. Lond. Journ. of Bot., vol. 2, ined. Herb. Bras. n. 5797.*

HAB. Bushy places, at the summit of the Organ Mountains, Brazil. *Fl.* April.

This very fine composite plant has been selected by Mr. Gardner to commemorate the name of his excellent friend, the late J. E. Bowman, Esq., of Manchester, a gentleman no less known by his botanical, than his geological labours. He considers it to hold an intermediate station between *Trixis* and *Chabræa*, differing from this latter in having an involucre of several series of scales, a deeply alveolate and pilose receptacle, and a pappus of more than one series, and from the former in its possessing a many-flowered capitulum, and a foliaceous involucre of several series.

The full generic character and description will very shortly appear in the second volume of the London Journal of Botany.

Fig. 1. Floret. *f.* 2. Stamens. *f.* 3. Apex of style. *f.* 4. Achenium. *f.* 5. Hairs from the pappus:—*magnified.*







TAB. DXXI.

LUPINUS PARVIFOLIUS. *Gardn.*

Fruticosus erectus ramosus, ramis dense foliosis, foliis integris sessilibus exstipulatis ellipticis oblongisve acutis basi obtusis utrinque adpresse sericeo-villosis, floribus dense spicatis, calycis bibracteolati labio superiore bifido inferiore tridentato.

Lupinus parvifolius. *Gard. Herb. Bras. n.* 4502.

HAB. In narrow rocky valleys, near Cidade Diamantina, the capital of the Diamond district, Brazil. Aug. 1840.

Frutex 6-pedalis, ramosissimus. *Rami* dense foliosi. *Folia* 8-12 lin. longa. *Spica* contracta. *Flores* cœrulei. *Legumen* 2-4 spermum, valde adpresse sericeo-villosum.

Another species in my Herbarium, allied to this, may be characterized as follows :—

Lupinus decurrens; fruticosus, decumbens, dense lanuginoso-villosus, foliis sessilibus decurrentibus oblongis acutis, calycis bibracteolati labio superiore bifido inferiore tridentato, legumine villosa 4-5-spermo.

Lupinus decurrens. *Gardn. Herb. Bras. n.* 4503.

HAB. In elevated mountain campos, near the capital of the Diamond district, Brazil. Aug. 1840.—*G. Gardner.*

Fig. 1. Calyx and pistil :—*magnified.*





TAB. DXXII.

TURNERA DICHOTOMA. *Gardn.*

Fruticosa dichotoma, foliis sessilibus late ovatis cordatis acutis coriaceis margine reflexis erecto-patentibus supra glabris nitidis subtus albo-villosis, pedunculis axillaribus terminalibusque confertis unifloris liberis, bracteolis linearibus, calycibus, strigoso-pilosis.

Turnera dichotoma. *Gardn. Herb. Bras. n.* 4695.

HAB. On bare elevated tracts, in the Diamond district of Brazil. Aug. 1840.

Fruticulus pedalis et ultra, ramosus. *Rami* dichotomi, dense foliosi. *Folia* alterna, sessilia, late ovata, cordata, acuta, coriacea, marginibus reflexa, erecto-patentia, supra glabra, nitida, subtus dense albo-lanuginosa, 3-4 lin. longa, 3 lin. circiter lata. *Pedunculi* axillares terminalesque, confertocapitati, uniflori, liberi. *Flores* bibracteolati, bracteis linearibus, pilosis. *Calyx* tubulosus, quinquefidus, strigoso-pilosus. *Petala* 5, lutea, ovato-oblonga, ad faucem tubi calycis inserta, calycis laciniis subæqualibus. *Stamina* 5, inclusa; *filamenta* ad basin tubi calycis inserta. *Antheræ* oblongæ. *Ovarium* villosum. *Styli* 3, apice multifidi.

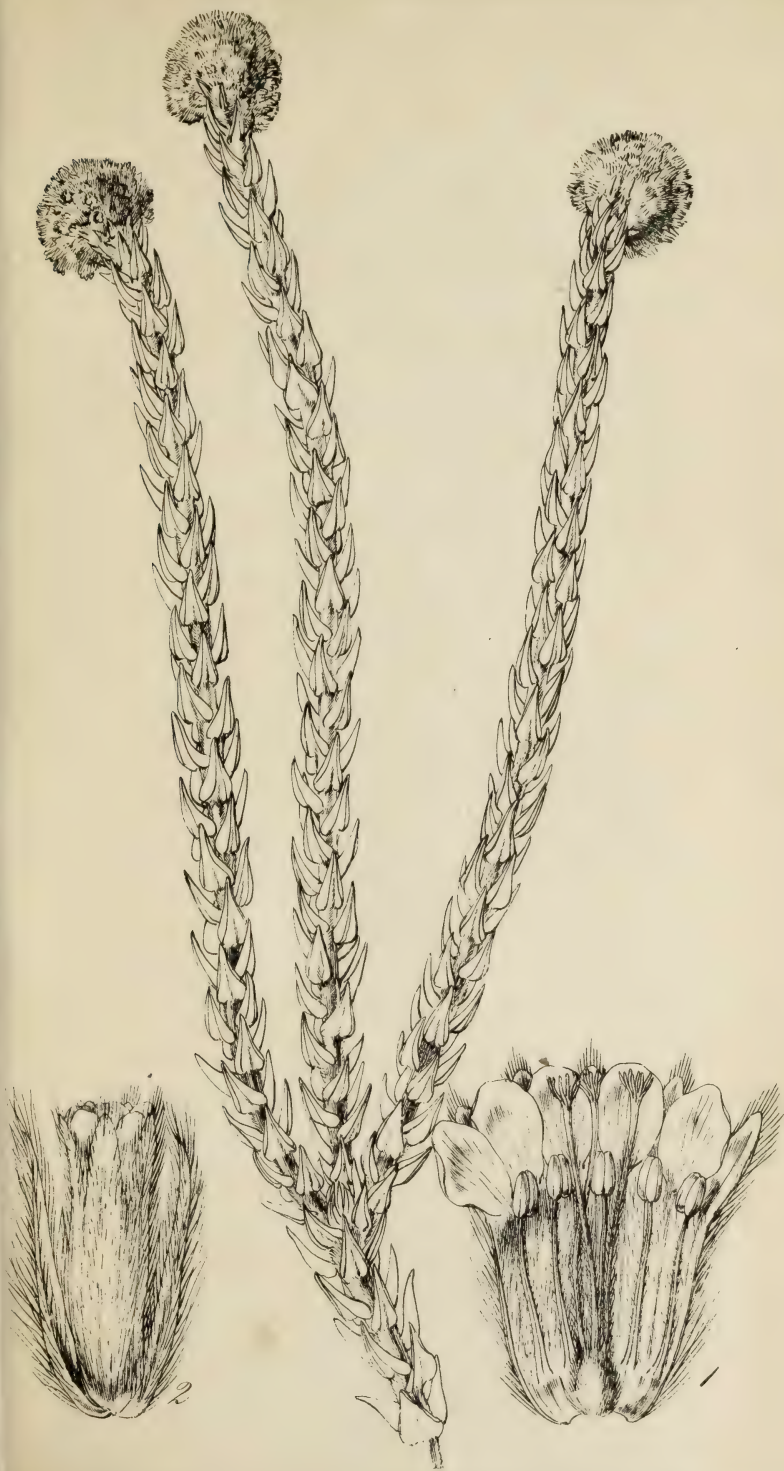
The specimen here represented does not give a good idea of the habit of this plant, the stems being dichotomously divided three or four times. Another species, from the same locality, may be distinguished thus:—

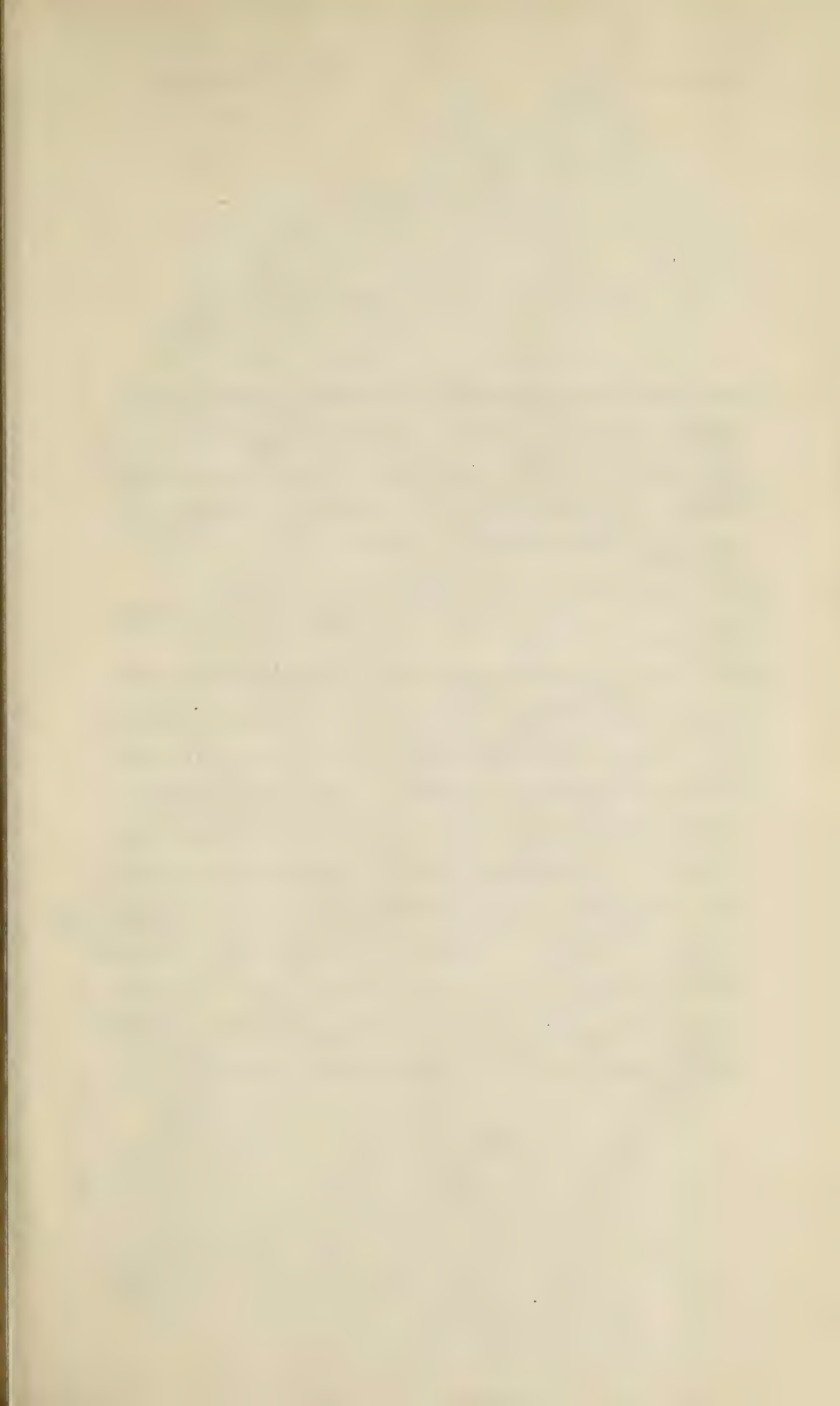
Turnera procumbens; fruticosa procumbens, foliis confertis petiolatis anguste linearibus obtusis (4 lin. circiter longis) margine reflexis supra nitidis utrinque petiolisque pilosiusculis, pedunculis petiolo connatis unifloris, bracteolis lineari-subulatis, calycibus strigoso-pilosis.

Turnera procumbens. *Gardn. Herb. Bras. n.* 4696.

HAB. In elevated campos, near Cidade Diamantina, Province of Minas Geraes, Brazil. Aug., 1840.

Fig. 1. Turnera dichotoma. Flower, with the calyx and corolla laid open. *f. 2.* Flower and bractæas:—*magnified.*





TAB. DXXIII.

PÆPALANTHUS UNCINATUS. *Gardn.*

Erectus brevis simplex, foliosus, foliis confertis lineari-lanceolatis acutis pubescentibus ciliatis demum glabratis inferioribus patentibus, pedunculis 4-5 compressis striatis vaginisque pilosis, his apice oblique fissis acutis, capitulis hemisphericis, bracteis involucrantibus ovato-lanceolatis acuminatis pungentibus stellato-patentibus flores superantibus, stigmatibus simplicibus.

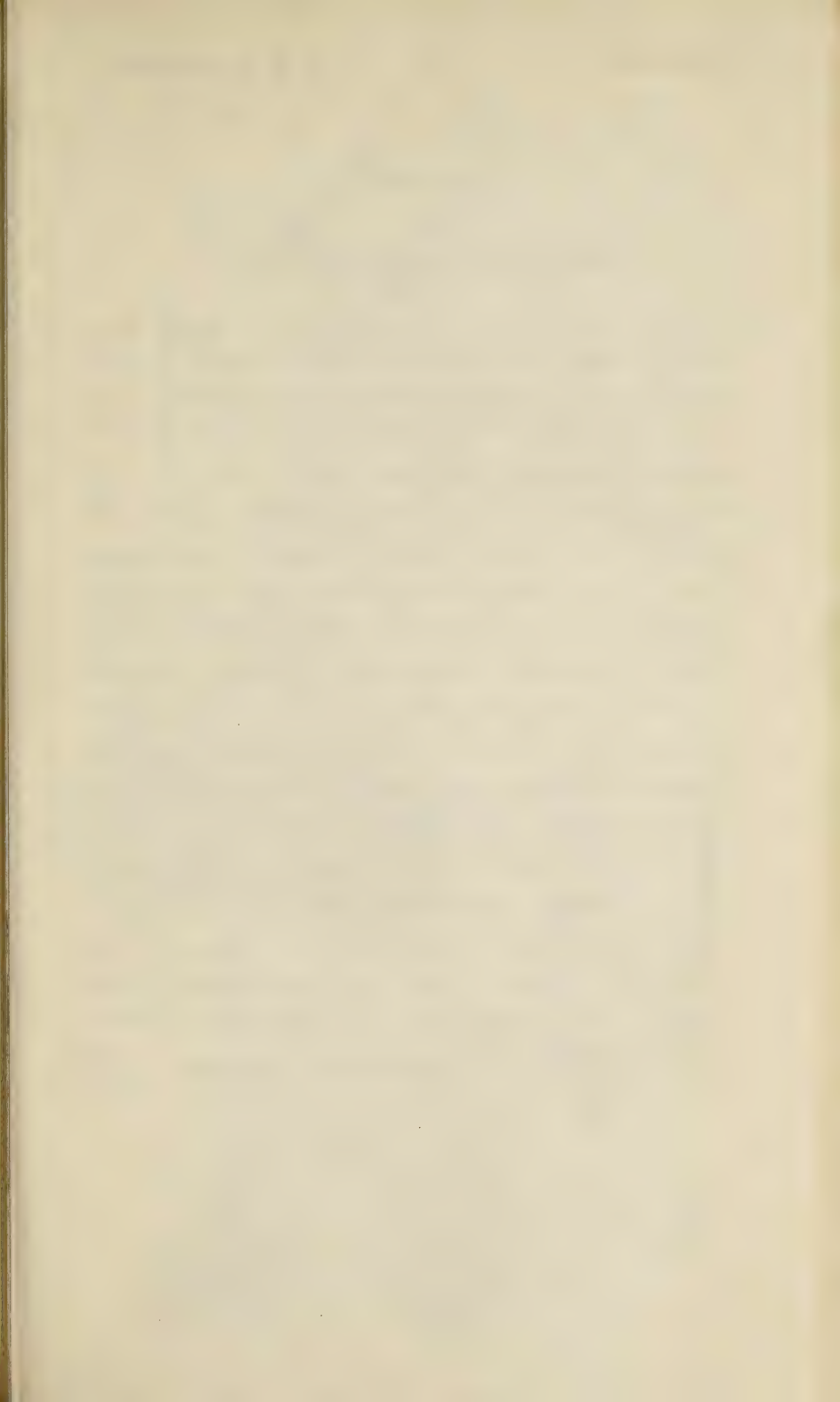
Pæpalanthus uncinatus. *Gardn. Herb. Bras. n. 5266.*

HAB. In sandy campos, Serro do Frio, Diamond district, Brazil.
Aug. 1840.

Caudeæ brevis, erectus, dense foliosus. *Folia* lineari-lanceolata, acuta, pubescentia, ciliata, demum glabrata, bipollicaria. *Pedunculi* 4-5, rigidi, striati, pilosi. *Vaginæ* 2-pollicares, apice oblique fissæ, acutæ, pilosæ, folia juniora excedentes. *Capitula* hemispherica. *Bracteæ* involucrantes steriles, lanceolatæ vel lanceolato-ovatæ, acuminatæ, radiatæ; bracteæ flores stipantes lanceolatæ longe acuminatæ, pilosæ, apice uncinatæ. *Receptaculum* pilosum. *Flores masculi* pedicellati, cum fœmineis mixti: *sepala* 3 exteriora lanceolata, acuminata, glabra; *exteriora* in tubum obconicum, apice trilobum connata. *Stamina* 3. *Antheræ* oblongæ, flavæ. *Flores fœminei* sessiles, pauci: *sepala* 3 exteriora lanceolata, acuminata, glabra; interiora simillima, sed tenuiora. *Pistillum* generis. *Stigmata* 3, simplicia.—*G. Gardner.*

Fig. 1. Male flower. *f. 2.* female ditto:—*magnified.*





TAB. DXXIV.

PÆPALANTHUS LARICIFOLIUS. *Gardn.*

Rhizomate crasso repente, caule simplici ad apicem dense folioso, cæteris nudo, foliis radicalibus confertis recurvis linearibus glabris, caulinis dense verticillatis, pedunculis fasciculatis vaginisque dense albo-piloso-pubescentibus, his apice oblique fissis acutis.

Pæpalanthus laricifolius. *Gard. Herb. Bras. n. 5262.*

HAB. In elevated sandy campos, on mountain tracts to the north of the Diamond district, Brazil. July, 1840.

Rhizoma crassum, repens, dense foliosum. *Caules* (rami) plurimi, $1\frac{1}{2}$ -3-pollicares, teretes, ad apicem dense foliosi, cæteris nudi, glabriusculi. *Folia* radicalia rosulato-congesta, linearia, recurvata, subpollicaria; caulinia ad apicem dense verticillata, erecta, lineari-subulata, pilosissima, subpollicaria. *Pedunculi* 2-4, valde piloso-pubescentes, 10-12 poll. longi. *Vaginæ* apice oblique fissæ, piloso-pubescentes. *Capitula* hemispherica, magna. *Bracteæ* involucrantes steriles, imbricatæ, exteriores obovato-oblongæ, glabræ, membranacæ, nitidulæ, flores superantes; *bracteæ* flores stipantes lineari-lanceolatæ, acuminatæ, glaberrimæ. *Receptaculum* albo-pilosum. *Flores masculi* cum fæmineis mixti, utrinque pedicellati. *Masc: sepala* 3 exteriora lanceolata, acuminata, glabra; 3 interiora in tubum obconicum trilobum connata. *Stamina* 3. *Antheræ* obliquæ, flavæ. *Flores fæminei: sepala* 3 exteriora anguste lanceolata, acuminata, glabra; interiora exterioribus similima, sed infra medium pilosa. *Pistillum* generis. *Stigmata* 3, filiformia, simplicia.—*G. Gardner.*

Fig. 1. Male flower. *f. 2.* female ditto :—*magnified.*



TAB. DXXV.

PÆPALANTHUS RUPESTRIS. *Gardn.*

Exiguus, cauliculis cæspitosis ramosis dense foliosis, foliis linearibus acutis pilosis, pedunculis terminalibus paucis glabris, vaginis bifidis pilosis.

Pæpalanthus rupestris. *Gardn. Herb. Bras. n. 5272.*

HAB. In dry shady clefts of rocks, near Cidade Diamantina, the capital of the Diamond district, Brazil. July, 1840.

Caules cæspitosi, conferte ramosi, dense foliosi, 1-2 pollicares. *Pedunculi* 2-5, terminales, filiformes, glabri, sesquipollicares. *Vaginæ* pilosæ apice bifidæ. *Capitula* hemispherica, albo-lanata, grani piperis nigri magnitudine. *Bracteæ* involucrantès steriles, ovatæ, acutæ, pellucidæ; *bracteæ* flores stipantes oblongæ, obtusæ, apice ciliatæ. *Receptaculum* pilosum. *Flores masculi* cum fœmineis mixti, longe pedicellati: *sepala* exteriora bracteis simillima; interiora in tubum obconicum apice trifidum connata. *Stamina* 3. *Antheræ* flavæ. *Flores fœminei* pedicellati: *sepala* exteriora oblonga, apice pilis vestita; interiora simillima. *Pistillum* generis. *Stigmata* filiformia, bifida.

Nearly related to the above, is the following little species from the same locality, and which may be distinguished thus.—*Pæpalanthus albidus*; pusillus, cauliculis confertis ramosis dense foliosis, foliis linearibus acutis pilosis, pedunculis terminalibus paucis glabris, vaginis pilosis apice bifidis et ciliosis, capitulis hemisphericis parvis albo-lanatis, bracteis involucrantibus ovatis acuminatis pellucidis.

Pæpalanthus albidus. *Gardn. Herb. Bras. n. 5273.*

HAB. In dry clefts of rocks, Diamond district, Brazil. July, 1840.—*G. Gardner.*

Fig. 1. Capitulum. *f. 2.* Leaves and sheath of the peduncle. *f. 3.* Male flower and bracteas. *f. 4.* Female flower and bracteas :—*magnified.*



TAB. DXXVI.

PÆPALANTHUS FLACCIDUS. *Kunth.*

Caulibus erectis, ramis simplicibus numerosissimis foliosis, foliis lineari-subulatis mucronatis rigidis margine longe pilosociliatis recurvato-patentibus, pedunculis terminalibus fasciculatis filiformibus trisulcis pilosiusculis, vaginis apice oblique fissis acutis glabris, capitulis hemisphericis albo-villosis, floribus dimeris, masculis diandris, antheris bilobis, bracteis calycibusque exterioribus apice albo-pilosis, stigmatibus simplicissimis.

Pæpalanthus flaccidus. *Kunth Enum. Plant.* 3, p. 511. *Gardn. Herb. Bras. n.* 5241.

Eriocaulon flaccidum. *Bongard in Act. Petrop.* vol. 6. 1. p. 636, 643, t. 4.

HAB. In moist sandy places, near Cidade Diamantina, the capital of the Diamond district, Brazil. Aug. 1840. Serra da Lappa, Province of Minas Geraes. *Riedel.*

I have not an opportunity of comparing my specimens with the figure given by Bongard, but they agree very well with the description in Kunth's *Enumeratio Plantarum*, the only difference being, that my specimens seem to be smaller and more erect than those collected by my friend M. Riedel in the Gold districts.—*G. Gardner.*

Fig. 1. Capitulum. *f.* 2. Male flower. *f.* 3. Female flower. *f.* 4. Leaf:—*magnified.*





TAB. DXXVII.

PÆPALANTHUS COMPACTUS. *Gardn.*

Caulibus simplicibus brevibus, foliis radicalibus linearibus acutis basi dilatatis supra margineque dense albo-villosis subtus glabriusculis vel versus basin pilosis, pedunculis glabris facile deciduis, vaginis bifidis glabris ad apicem ciliosis.

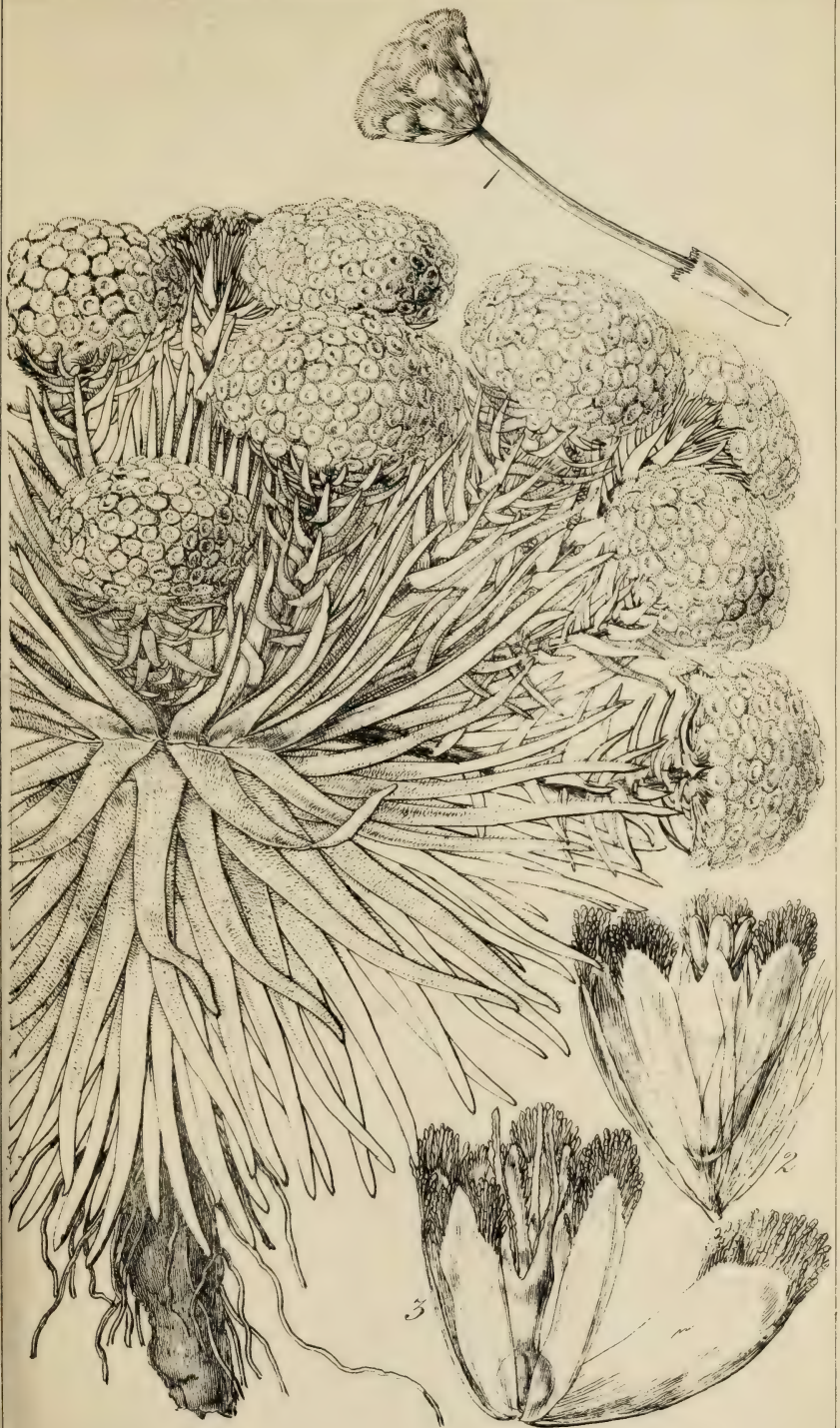
Pæpalanthus compactus. *Gardn. Herb. Bras. n.* 5247.

HAB. Elevated sandy campos in mountain tracts, beyond the Diamond district. July, 1840.

Radices fibrosæ, nigræ. *Caudex* crassus, densissime foliatus. *Caules* (rami) folia radicalia subæquantes, simplices, erecti, foliosi. *Folia* radicalia cæspitosa, linearia, basi dilatata, acuta, supra albo-pilosa, dense ciliata, subtus glabriuscula, 2-2½ pollicaria; caulina radicalibus simillima, sed multo minora (6-9-lin. longa), sessilia, patentia. *Pedunculi* 100 et plures, dense umbellati, glabri, 4-5 lin. longi. *Vaginæ* glabræ, apice bifidæ, ciliatæ. *Capitula* hemispherica, magnitudine seminis piperis nigri, albo-lanata. *Bracteæ* involucrantés steriles, oblongæ, apicem versus glabræ, dense ciliatæ; bracteæ flores stipantes lineari-oblongæ, ad apicem dense villosæ. *Receptaculum* pilosum. *Flores masculi* pedicellati: *sepala* exteriora oblonga, obtusa, apice pilis simplicibus crassiusculis obtusis albo-flavicantibus ornata et ciliata; interiora in tubum obconicum apice inciso-laceratum concreta. *Stamina* 3, exserta. *Antheræ* oblongæ, flavæ. *Flores feminei* sessiles; *sepala* 3 exteriora oblonga, obtusa, apice ciliata; interiora exterioribus similia, sed paulo angustiora, acutiora, et tenuiora. *Pistillum* generis. *Stigmata* 3, filiformia, simplicia.

This species of *Pæpalanthus* belongs to the division *umbellati* of Bongard; and is allied to *P. Bahiensis* of Kunth, *Enum.* 3, p. 517.—*G. Gardner.*

Fig. 1. Peduncle, sheath and capitulum, *f.* 2. Male flower. *f.* 3. Female ditto:—*magnified.*



TAB. DXXVIII.

CLADOCAULON BRASILIENSE. *Gardn.*

GEN. CHAR. *Flores* capitati, androgyni, singulo bractea stipato, centrales masculi, marginales fœminei. *Mas. Perigonium* exterius triphyllum, interius tubulosum, limbo trilobo. *Stamina* 3, perigonii interioris tubo inserta, longe exserta. *Antheræ* ovatæ, biloculares, introrsæ. *Fem. Perigonium* duplex; exterius trisepalum; *sepala* lineari-oblonga, apice pilosa, basi connata, demum rigidulo-membranacea, reflexa, decidua; interiora exterioribus similia sed breviora, tenuiora, erecta et persistentia. *Ovarium* globosum triloculare. *Stylus* elongatus *Stigmata* 3, filiformia, simplicia. *Capsula* trilocularis, loculicida.—*Suffrutex Brasiliensis, erectus, ramosissimus, foliosus; ramis teretibus; foliis lineari-subulatis, deflexis, pilosis, demum glabratissimis; pedunculis axillaribus, geminis, versus apicem ramorum congestis.*

Cladocaulon Brasiliense. Gardn. Herb. Bras. n. 5250.

HAB. Rare on the ascent of the Serra da Mendanha, from the Rio Jiquitimhonha, Diamond district, Brazil. July, 1840.

Suffrutex ramosissimus. *Folia* deflexa, 7 lin. circiter longa, pilosa, basi albo-villosa, demum glabrata. *Pedunculi* laterales, gemini, breves, pilosi, 7 lin. longi. *Vaginæ* glabriusculæ, apice oblique fissæ, et villosæ. *Capitula* hemispherica, albolanata, magnitudine pisi minoris. *Bracteæ* involucrantæ steriles, latæ, ovatæ, obtusæ, nitidæ, pilosiusculæ, apice albo-pilosæ; bracteæ flores stipantes oblongo-lanceolatæ, apice dense pilosæ. *Receptaculum* pilosum. *Flores* ut in char. gen.

The remarkable habit of this plant, as well as the curious structure of the female flowers, justly entitle it to rank as a distinct genus. The habit is well represented by the artist, but the dissections are very far from being correct. The female flower I always find to be such as is given in the description, and not that of a true species of *Pæpalanthus*, as represented in the plate. Nor are the lobes of the inner series of the perianth of the male flower pilose.—*G. Gardner.*

Fig. 1. Capitulum, from beneath the apex of a branch. *f. 2.* Male flower. *f. 3.* Female flower; (*incorrectly represented, according to the above description*):—*magnified.*





TAB. DXXIX.

SMILACINA FLEXUOSA.

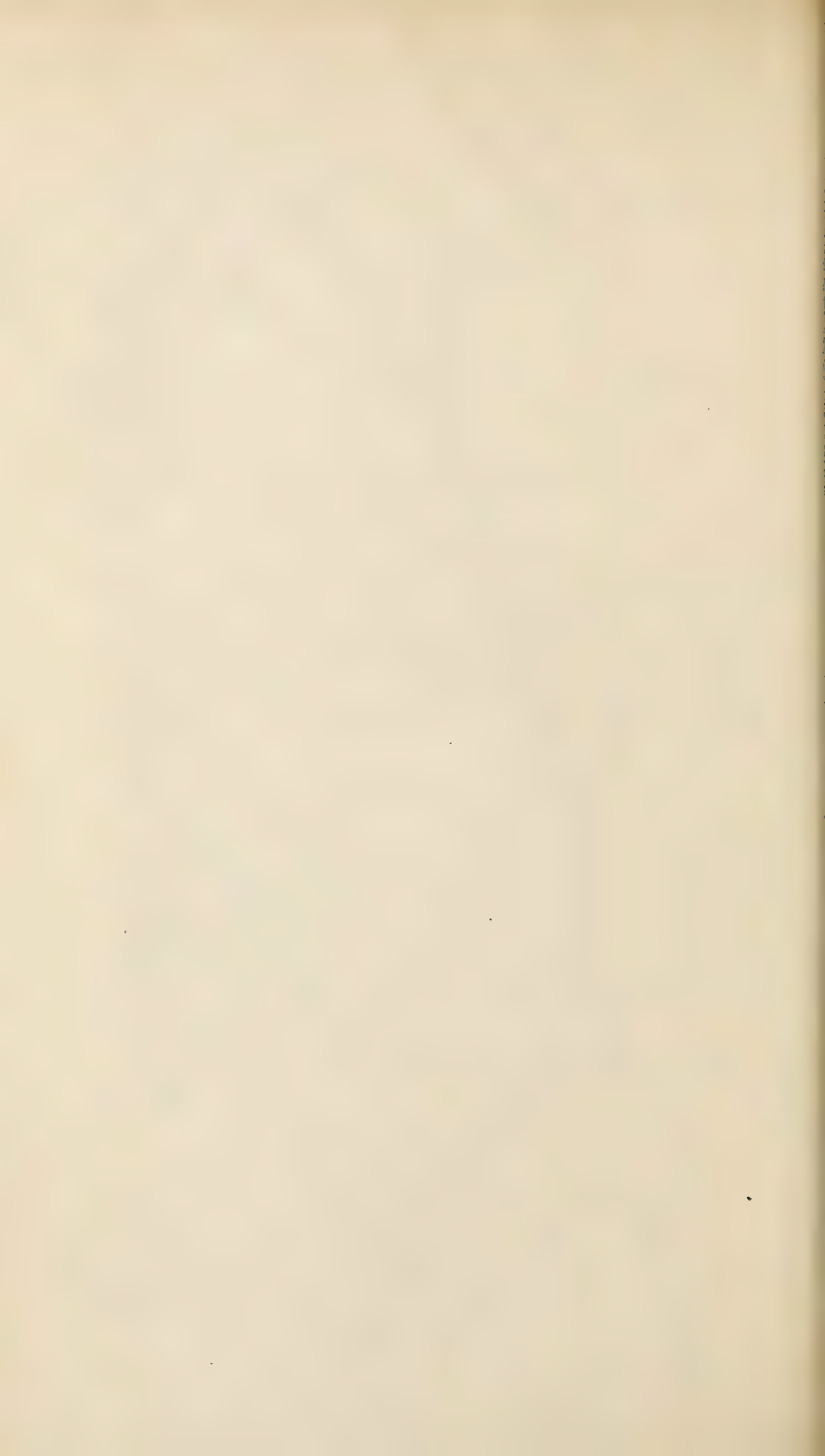
Glaberrima, caule elato strictiusculo, foliis bifariam insertis subsecundis rotundato-ovatis brevi-acuminatis petiolatis, petiolo basi-subauriculato-decurrente, racemo simplici terminali nutante, rachi flexuoso geniculato, pedicellis patentibus longitudine floris, sepalis obovatis basi attenuatis patentibus.

HAB. Guatemala (probably the mountain districts). *G. U. Skinner, Esq.*

This is extremely different from any known species of *Smilacina* of North America; nor has any been supposed to exist, except in the northern parts of that vast continent. The present species was introduced by seeds from Guatemala, to the Botanic Garden of Glasgow. Its nearest affinity is doubtless with an East Indian species, the *Smilacina purpurea*, Wall. Pl. As. Rar. v. 2, tab. 144, from Nepaul; but that has a perfectly straight and very downy rachis and pedicels to the raceme, and differently formed sepals.

Fig. 1. Flower. *f. 2.* Transverse section of a germen:—*magnified.*





TAB. DXXX.

MANIHOT GRAHAMI.

Foliis profunde palmato-multifidis, lacinis 5-13 lanceolatis integerrimis subtus glaucis, petiolis nervisque viridibus, paniculis densis folio brevioribus, floribus (magnis flavo-viridibus) campanulatis.

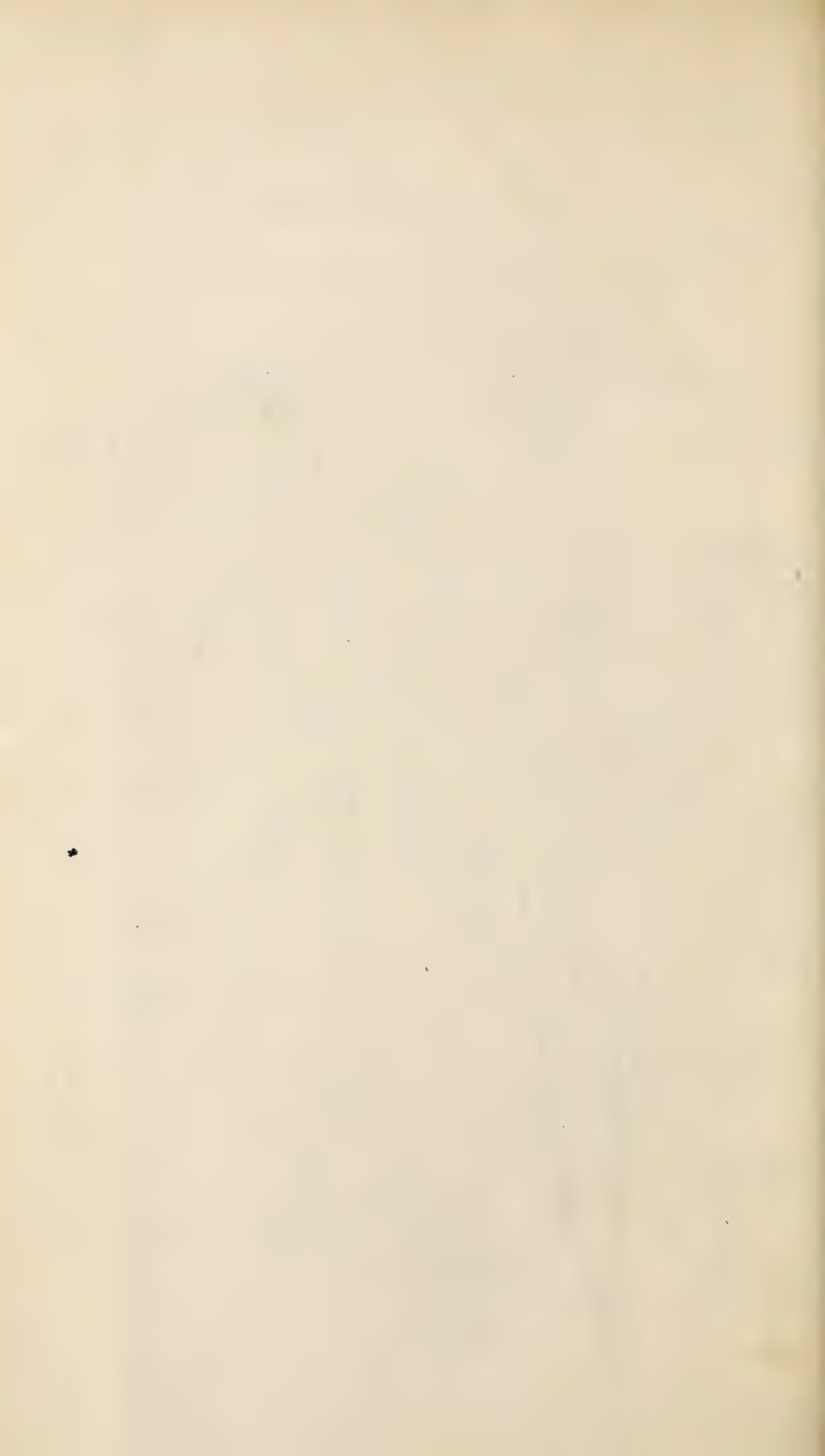
Janipha Lœflingii. *Graham in Ed. Phil. Journ.* June, 1840. (*excl. Syn.*)— β multifida.

HAB. Woods of the Parana. *Tweedie.*

This evidently belongs to the esculent group of *Manihots*, of which the *Jatropha Manihot*, Linn., may be considered the type. Dr. Graham has referred it to the *Janipha Lœflingii*, Humb. (*Jatropha Janipha*, Linn.); yet I think it has no real connexion with that species; and I was myself rather disposed to look upon it as a var. of the real *Manihot* (figured in Bot. Mag. Tab. 3071.) But I now possess several native specimens, all from the same locality, and I have seen various cultivated ones raised from seeds, gathered on the Parana, and these retaining all their peculiarities, that I am rather disposed to consider it a distinct and a new species. At the same time, it is very difficult to define the essential characters. It is scarcely necessary to compare it with any but *Manihot Api*, Pohl. (*Jatropha Manihot*, Linn.), *M. utilissima*, Pohl. (equally the *J. Manihot*, Linn., for they seem to differ only in the poisonous or innocuous qualities) and the *M. flabellifolia*. From all these our plant differs in the more flaccid habit, in the more numerous segments of the leaves, in the entire absence of purple on the petioles and nerves and flowers, in the much greater size of the perianth, which, both in the male and female flowers, are pale yellow green, with two red streaks in the middle of each segment. The eye distinguishes the species at once even in the dry state.

Fig. 1. Pistil and hypogynous gland. *f. 2.* Section of a male flower :—*magnified.*





TAB. DXXXI.

OAKESIA CONRADI. *Tuck.*

GEN. CHAR. *Flores* dioici. *Masc. Cal.* triphyllus, deciduus, foliolis membranaceis, equitantibus, apice obtusis, basi attenuatis, extus bractea squamæformi munitus. *Corolla* tenuissime membranacea cyathiformis, apice truncata et minutissime denticulata, longitudinaliter fissa, deinde diphylla. *Stamina* 3 longe exserta. *Antheræ* globoso-didymæ, biloculares, loculis per rimam longitudinalem lateraliter dehiscen-
tibus.—*Fem. Cal.* triphyllus, persistens; foliolis membranaceis equitantibus, apice dilatatis, obtusis; extus bractea arida squamæformi cinctus. *Corolla* diphylla foliolis equitantibus. *Ovarium* urceolatum, basi attenuatum, triloculare, loculis uniovulatis. *Ovula* erecta anatropa. *Discus hypogynus* nullus. *Stylus* tenuis, brevi-exsertus, apice trifidus, laciniis subulatis, recurvis, intus stigmatosis. *Fructus* parvus drupaceus, siccus depresso-globosus tri-abortu-dipyrenus, pyrenis cartilagineis monospermis. *Semen?* — Fructiculas *Boreali-Americanus*, depressus, ramosissimus, ramis retroflexis, tenuibus; foliis verticillatis ternis quaternisve patentibus, convexo-planis, anguste linearibus, obtusiusculis, margine apiceque evanescente scabriusculis, dorso longitudinaliter sulcatis floribus dioicis, terminalibus, glomeratis, sessilibus; capitulis extus squamis aridis cinctis. *Klotzsch.*

Oakesia Conradi. *Tuckerm. in Hook. Lond. Journ. of Bot. v. 1, p. 446.*

Ceratiola ericoides. *Herb. Lamb.*

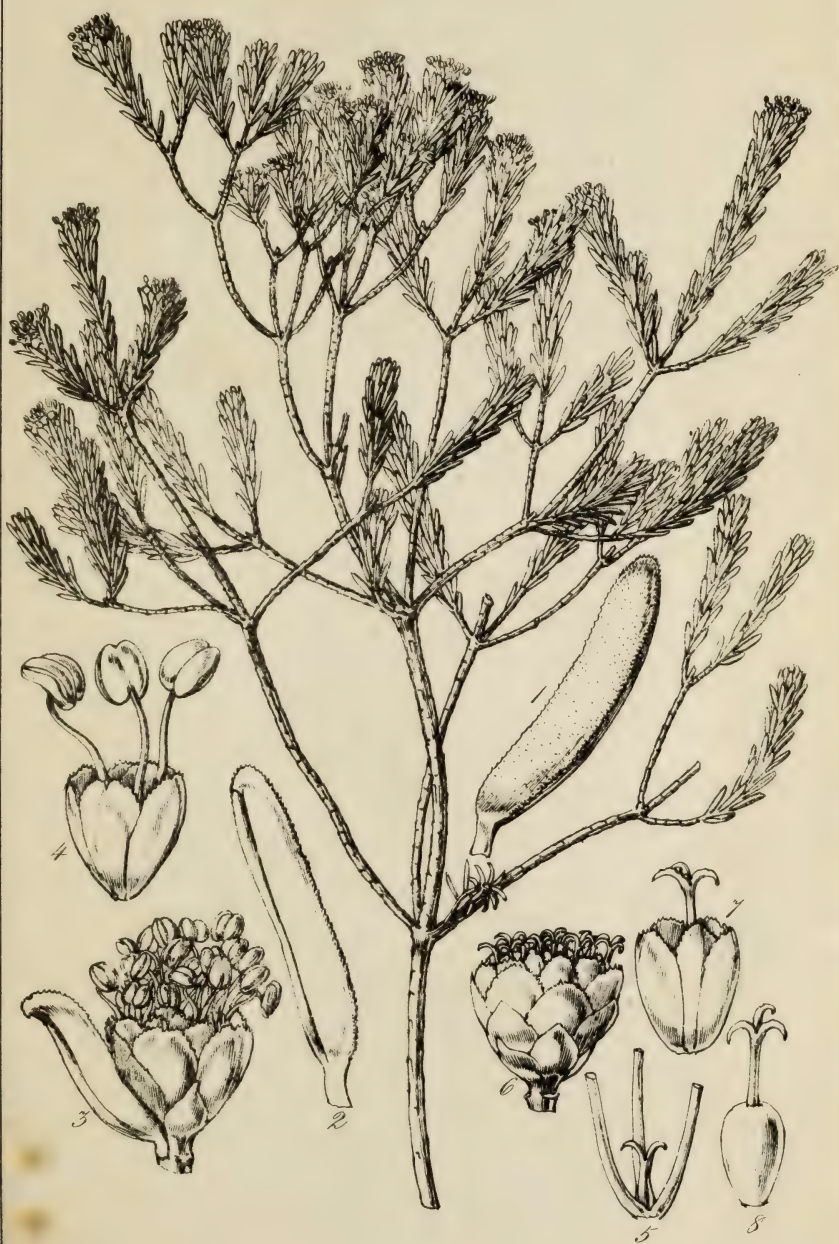
Empetrum Conradi. *Torr. in Ann. Lyc. N. Y.*

Tuckermania Conradi. *Klotzsch in Wiegmann's Archiv. April, 1842.*

HAB. Newfoundland, *Cormack*; New Jersey, *Conrad*, *Rafinesque*; Plymouth, Massachusetts, *Oakes*, *Tuckerman*, *Russel*; Kennabeck R. Maine, *Nuttall*.

My specimens of this interesting plant are unfortunately deficient in fruit; nor are the flowers in so good a state as I could desire, which I regret the more, as I do not find them to accord so well with my friend Dr. Klotzsch's description as I would wish. For my only flowering specimens I am indebted to Mr. Tuckerman. That gentleman has paid a well-merited compliment to his countryman, Mr. Oakes, in naming this genus after him.

Fig. 1. Upper, and *f. 2.* underside of a leaf. *f. 3.* Head of male flowers. *f. 4.* Single male flower. *f. 5.* Abortive pistil of ditto. *f. 6.* Head of female flowers. *f. 7.* Single female flowers. *f. 8.* Pistil:—*magnified.*





TAB. DXXXII.

CHARA LATIFOLIA. Willd.

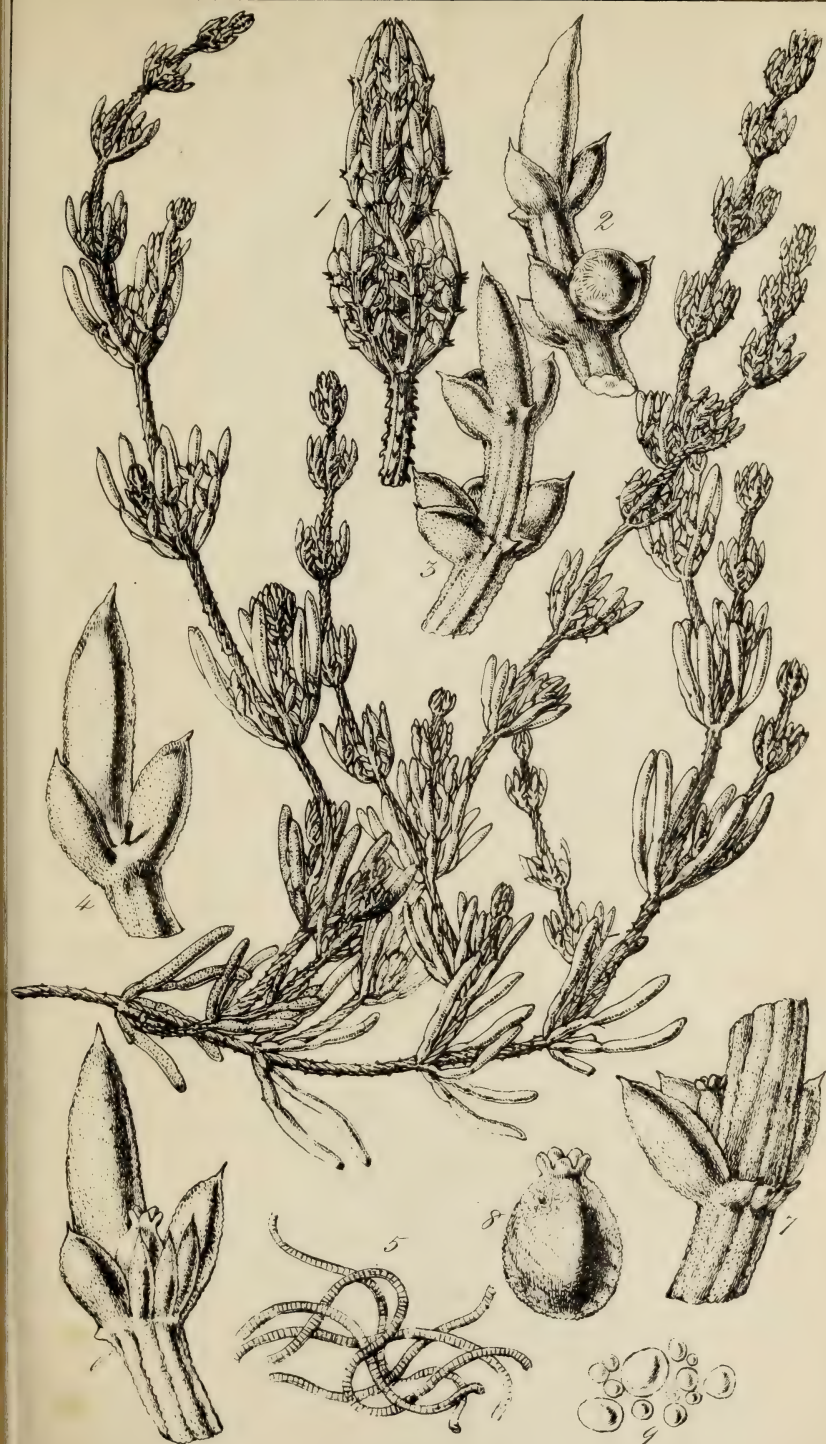
Caulibus spongiosis semipellucidis minutissime granulatis, junioribus sæpe muricatis, ramulis verticillatis foliosis, foliis ovali-oblongis mucronato-acutis, antheris ebracteatis, fructu bracteis tribus linearibus suffulto.

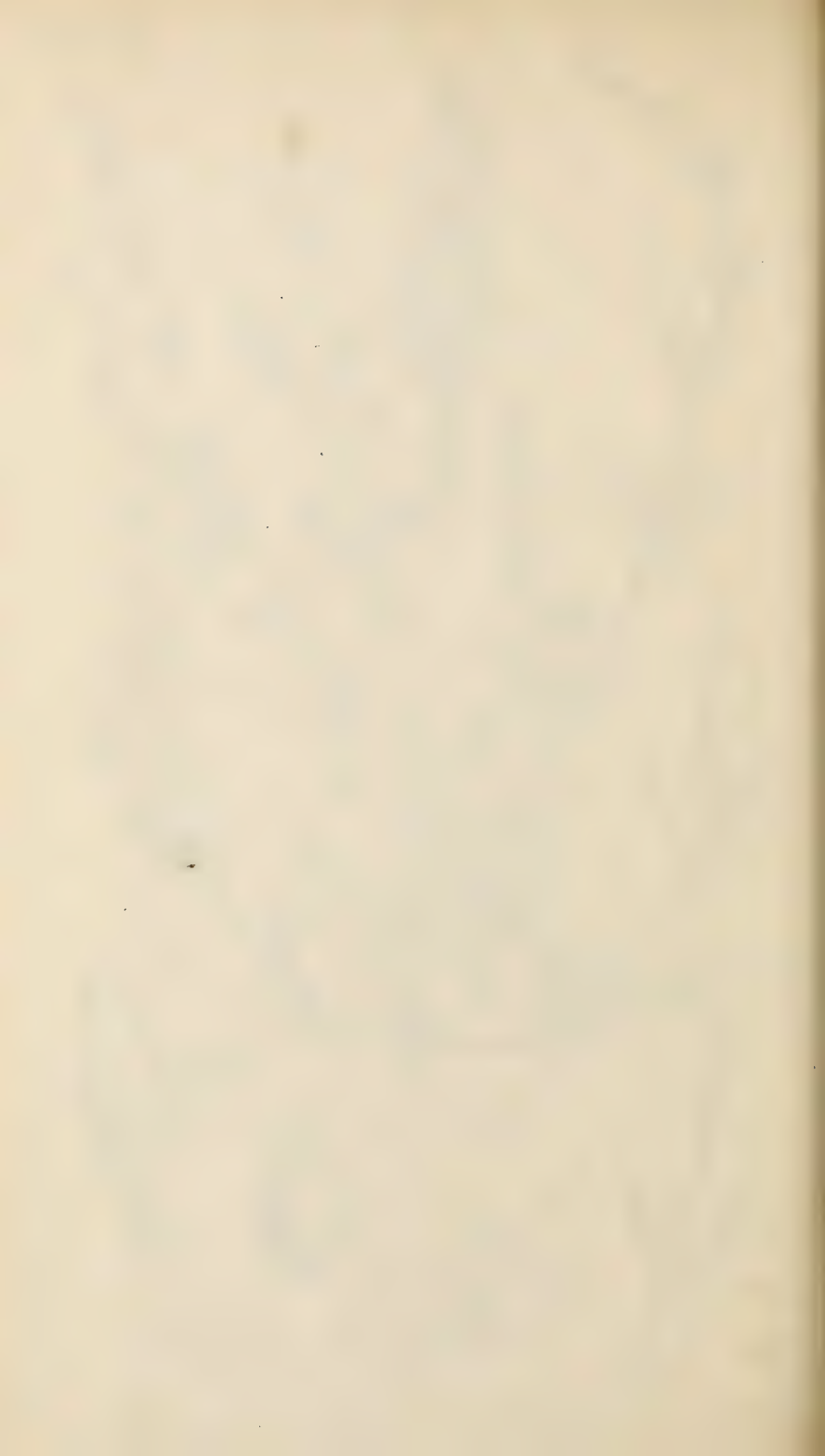
Chara latifolia. “Willd. in Mey. d. Ges. Nat. Freunde. B. 3.”
Meyer in Linnæa, v. 2, p. 79. Hook. in Lond. Journ. of Bot. v. 1, p. 43.

HAB. Belvidere Lake, Co, Westmeath, Ireland. Mr. D. More.

I had the pleasure of announcing this discovery of a new *Chara* to the British Flora, in the 1st. vol. of the London Journal of Botany. At that time Mr. More had not detected the fruit; but since, he has been more fortunate, and has thus enabled me to represent perfect specimens of a species never before figured. It is at once distinguished by its broad and sedum-like leaves. I find no bractea at the base of the (so-called) anthers; but on the opposite side of the branch, where the anther is produced, are two or three small raised points. Three similar points are opposite the three bracteas of the fruit.

Fig. 1. Apex of a young fertile plant. *f. 2.* Smaller portion, with anther, seen in front. *f. 3.* Back view of the same branch. *f. 4.* Portion from which the anther is removed, showing its receptacle. *f. 5.* Portion of the contents of an anther. *f. 6.* Fruit-bearing branch. *f. 7.* Back view of the same. *f. 8.* Fruit. *f. 9.* Contents of the nucule:—more or less *magnified*.





TAB. DXXXIII.

MARSIPPOSPERMUM GRANDIFLORUM.

GEN. CHAR. *Sepala* 6 subulato-lanceolata canaliculata, inæqualia, erecto patentia, canaliculata, persistentia, basi bracteis 3 membranaceis suffulta. *Stam.* 6, sepalis breviora. *Filamenta* brevissima. *Antheræ* oblongæ. *Pistillum* longitudine sepalorum breviorum. *Germen* oblongum, obtuse trigonum, stylo gracili subduplo longius. *Stigma* longitudine styli, inferne dilatatum ad basin in ramis tribus erectis rigidis fissum. *Capsula* sepalis persistentibus duplo brevior, subprismatica, oblonga, acutissima apice dehiscens, trifida, unilocularis. *Semina* receptaculis 3 parietalibus affixa, numerosa, arillata utrinque acuminata.—Planta rigida cæspitosa, unifoliata, folio radicali basi vaginato, tereti: culmo unifloro.

Marsippospermum grandiflorum.

Marsippospermum calyculatum. Desv. Journ. de Bot. v. 1, p. 330.

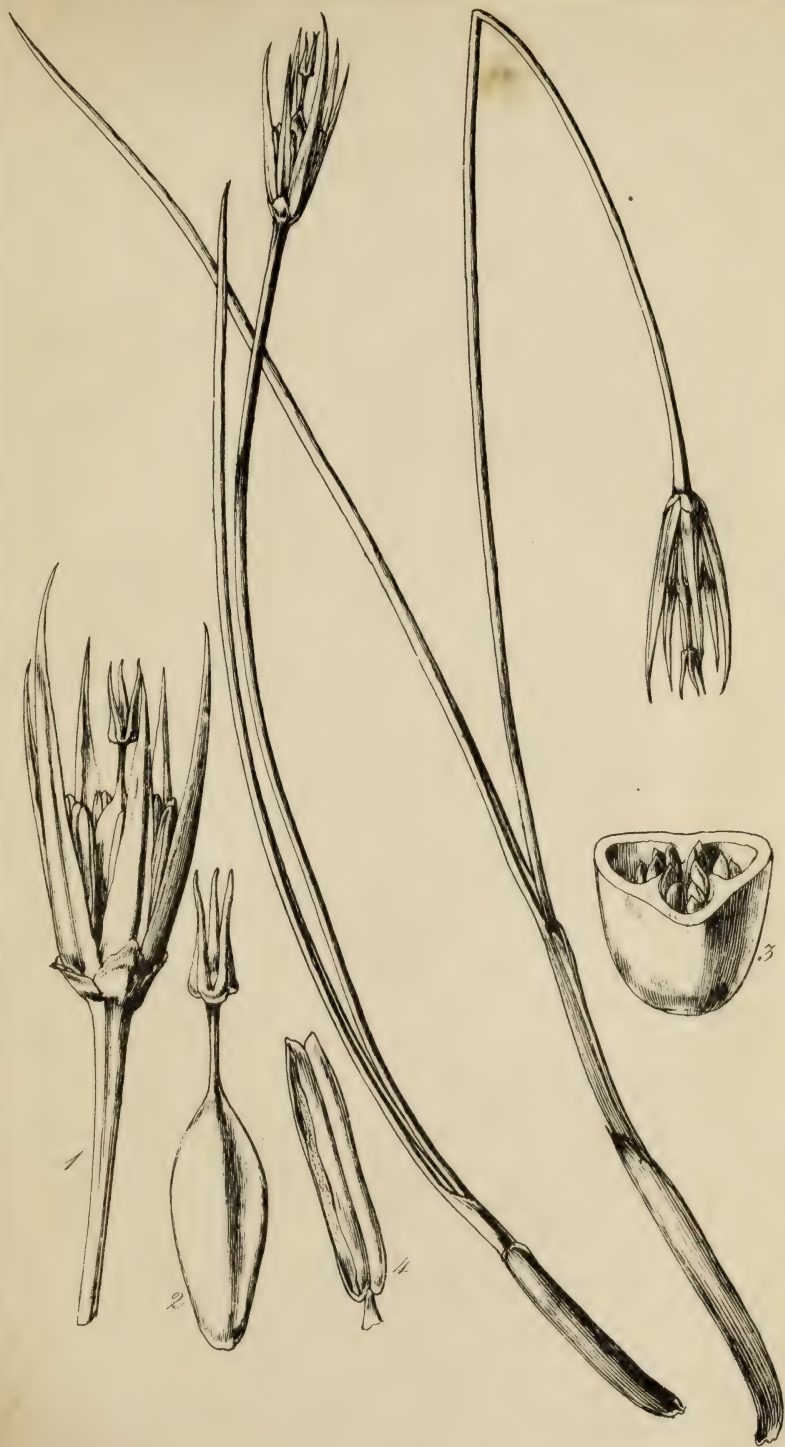
Juncus grandiflorus. Linn. Fil. Suppl. p. 209.—Forst. Comm.

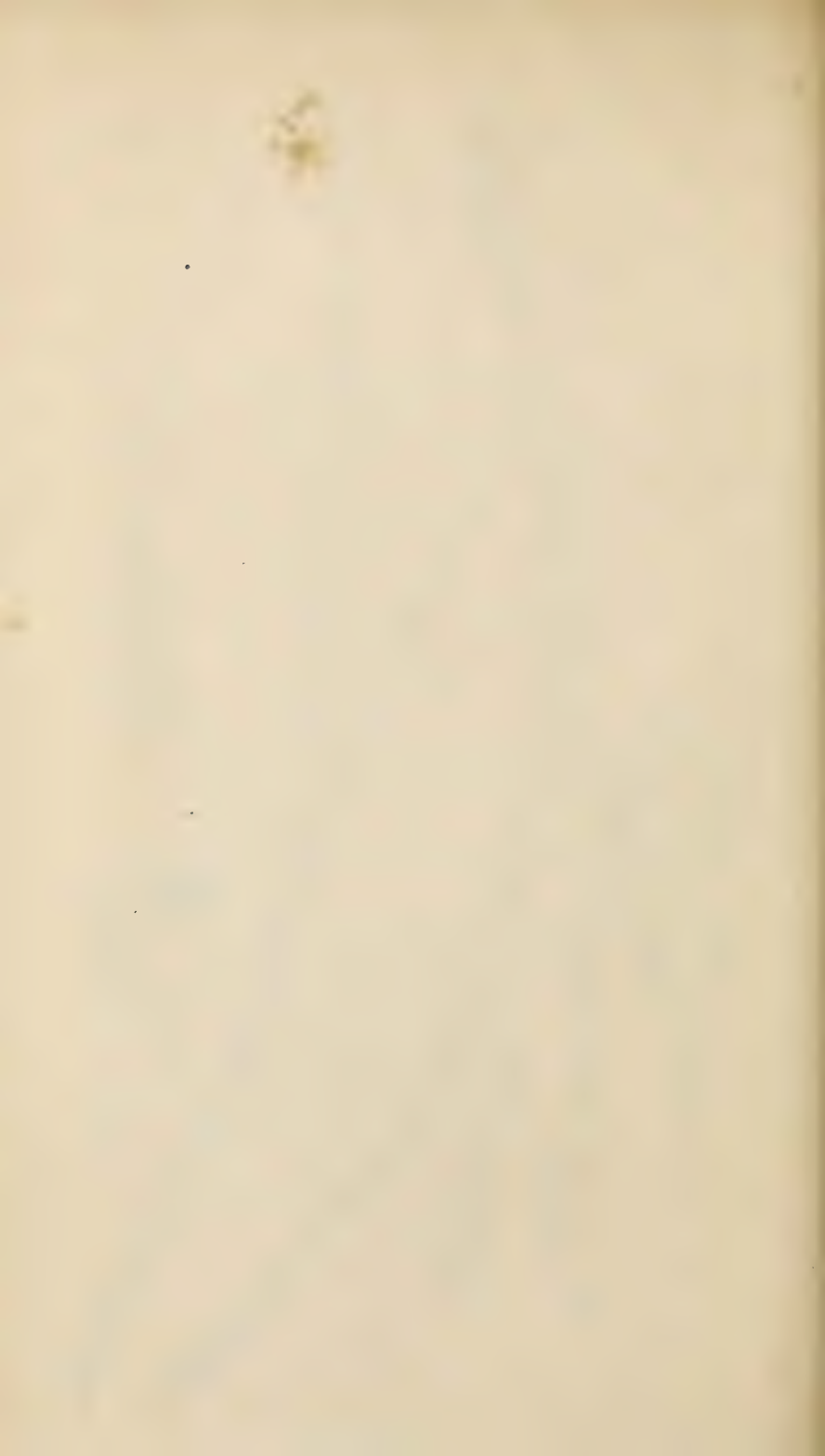
Goett. 9, p. 27, t. 3. Lam. Cycl. 3, p. 266. Roem. et Sch. Syst. Veget. 7, p. 248.

HAB. Straits of Magellan, Forster. Falkland Islands, D'Urville, Mr. Wright.

The habit of this plant is so peculiar, and the size and texture and structure of the flower so different from any other *Juncus*, that I cannot but think Desvaux was correct in raising it to the rank of a genus, although it has not been adopted by succeeding authors. It probably grows larger in the Straits of Magellan than in the Falkland Islands; for the inhabitants are said by Forster to make cordage and baskets of its tenacious leaves and culms. The ripe fruit I have not seen.

Fig. 1. Flower, with its three bractæ. f. 2. Pistil. f. 3. Germen, cut through transversely. f. 4. Stamen:—magnified.





TAB. DXXXIV.

TETRONCIUM MAGELLANICUM. Willd.

GEN. CHAR. *Flores* dioici. *Perianthium* hexaphyllum foliolis subcoloratis, ovato-concavis, tribus inferioribus altius insertis. *Stamina* 6, foliolorum perianthii basi inserta: *filamenta* brevissima: *antheræ* extrorsæ, medio dorso affixæ. *Fœm.* *Perianthium* maris. *Stamina* 6. *Germen* ovato-acuminatum, 4 sulcatum (abortu 3) 4-loculare, (loculis uniovulatis), in stylis 3-4 subulatis sensim attenuatum. *Stigmata* simplicia. *Capsula* quadri-(abortu 3) locularis. *Semen* solitarium, erectum, basi affixum in loculi fundo. *Herba* pusilla cæspitosa perennis, caudibus repentibus ramosis foliosis, basi squamis scariosis nitidis tecta. *Folia* disticha plana subequitantia, lineari-acuminata. *Scapus terminalis, apice spicatus; fructibus arcte deflexis.*

Tetroncium Magellanicum. Willd. in Berl. Mag. 2. 17.

Triglochin reflexum. Vahl.

Cathantes, Rich.

HAB. Straits of Magellan. Forster. Falkland Islands. Mr. Wright.

The first aspect of this plant is rather that of *Carax pulicaris* or some allied species of that genus, than of Triglochin, from which genus I think it may fairly be separated, no less on account of its peculiar habit, which is harsh and rigid, than of its dicecious flowers, reflexed and tetramerous fruit. I possess only specimens with immature fruit.

Fig. 1. Portion of the spike with capsules. f. 2. Capsule with one of the cells laid open. f. 3. Transverse section of a capsule :—magnified.



TAB DXXXV.

TILLÆA MOSCHATA. D.C.

Caule prostrato repente basi ramoso, foliis connatis obovato-oblongis, floribus quadrifidis ad axillas superiores breviter pedunculatis, petalis obovatis filamentis dilatatis, carpellis ovato-globosis.

Tillæa moschata. *De Cand. Prodr. v. 3. p. 382.*

Crassula moschata. *Forst. Act. Goett. 9. p. 26.*

Bulliarda Magellanica. *De Cand. Bull. Philom. n. 49.*

Bulliarda moschata. *D'Urville Fl. des Malouin. p. 618.*

HAB. Straits of Magellan. *Forster.* Moist springy places among rocks, Falkland Islands. *D'Urville. Mr. Wright.*

The habit of the plant is that of our well-known *Montia fontana*. It is, I think, rightly referred by De Candolle to *Tillæa*. I find no hypogynous scales in my specimens: but it is difficult to see such minute parts in dried plants of so succulent a nature as the present. *D'Urville* describes 4 triangular nectaries; and he consequently places this plant in the genus *Bulliarda*. D.C.

Fig. 1. Portion of the stem with leaves. *f. 2. 3.* Flowers. *f. 4.* Stamen. *f. 5.* Pistils:—*magnified.*





Wrightianæ.

N. O. Primulaceæ.

TAB. DXXXVI.

LYSIMACHIA REPENS. *D'Urv.*

Caule repente ramosissimo, foliis obovatis subcarnosis basi attenuatis, floribus axillaribus solitariis brevi-pedunculatis, staminum filamentis inferne coalitis glabris.

Lysimachia repens. *D'Urv. Fl. des Iles Malouin. p. 606.*

HAB. Falkland Islands; margins of springs and streamlets.
D'Urville. Mr. Wright.

No author but D'Urville seems hitherto to have noticed this pretty little plant, which at first has altogether the appearance of our well-known *Bog-Pimpernel*: but the stamens are very peculiar, and will at once distinguish it from that, as well as from the Chilian *Anagallis alternifolia*, Cav. I should have placed it in the genus *Anagallis*, only that D'Urville speaks of the dehiscence of the fruit as decidedly that of a *Lysimachia*.

Fig. 1. Flower. f. 2. The same, more expanded. f. 3. pistil:—magnified.





TAB. DXXXVII.

CELASTRUS MAGELLANICUS.

Foliis ovatis seu ovato-lanceolatis acutis obtuse serratis coriaceis subtus pallidis subglaucis breviter petiolatis, pedunculis axillaribus brevibus unifloris medio bibracteolatis, bracteolis fimbriatis, capsula obcordata compressa, biloculari 2-sperma.

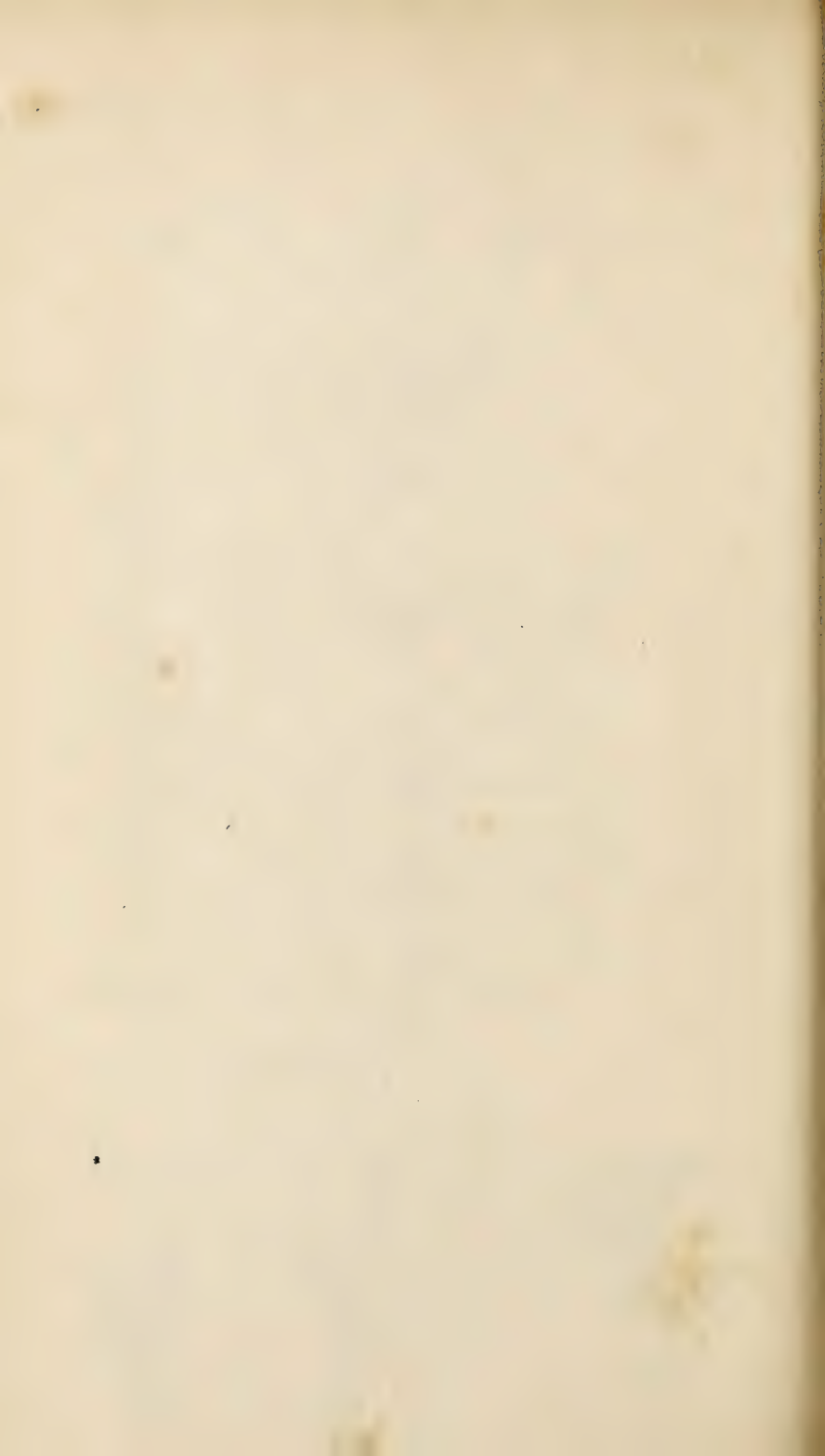
Celastrus? Magellanicus. *De Cand. Prodr.* 2. p. 8. Cassine Magellanica. *Lam. Ill. n.* 2590. *Encycl. Suppl. v.* 2. p. 130.

HAB. Straits of Magellan. *Commerson. Capt. King.*

Our specimen is from Capt. King's collection, formerly in the possession of Mr. Lambert. The leaves are perhaps broader than will justify the expression of "ovato-lanceolata," as given to this species by Lamarck; but there is every reason to believe it is only a slight variety of his species. The fruit seems to be truly that of a *Celastrus*.

Fig. 1. Fruit. *f.* 2. The same bursting open. *f.* 3. Seed, with its arillus:—*magnified.*





Kingianæ.

N. O. Rhamneæ.

TAB. DXXXVIII.

COLLETIA DISCOLOR.

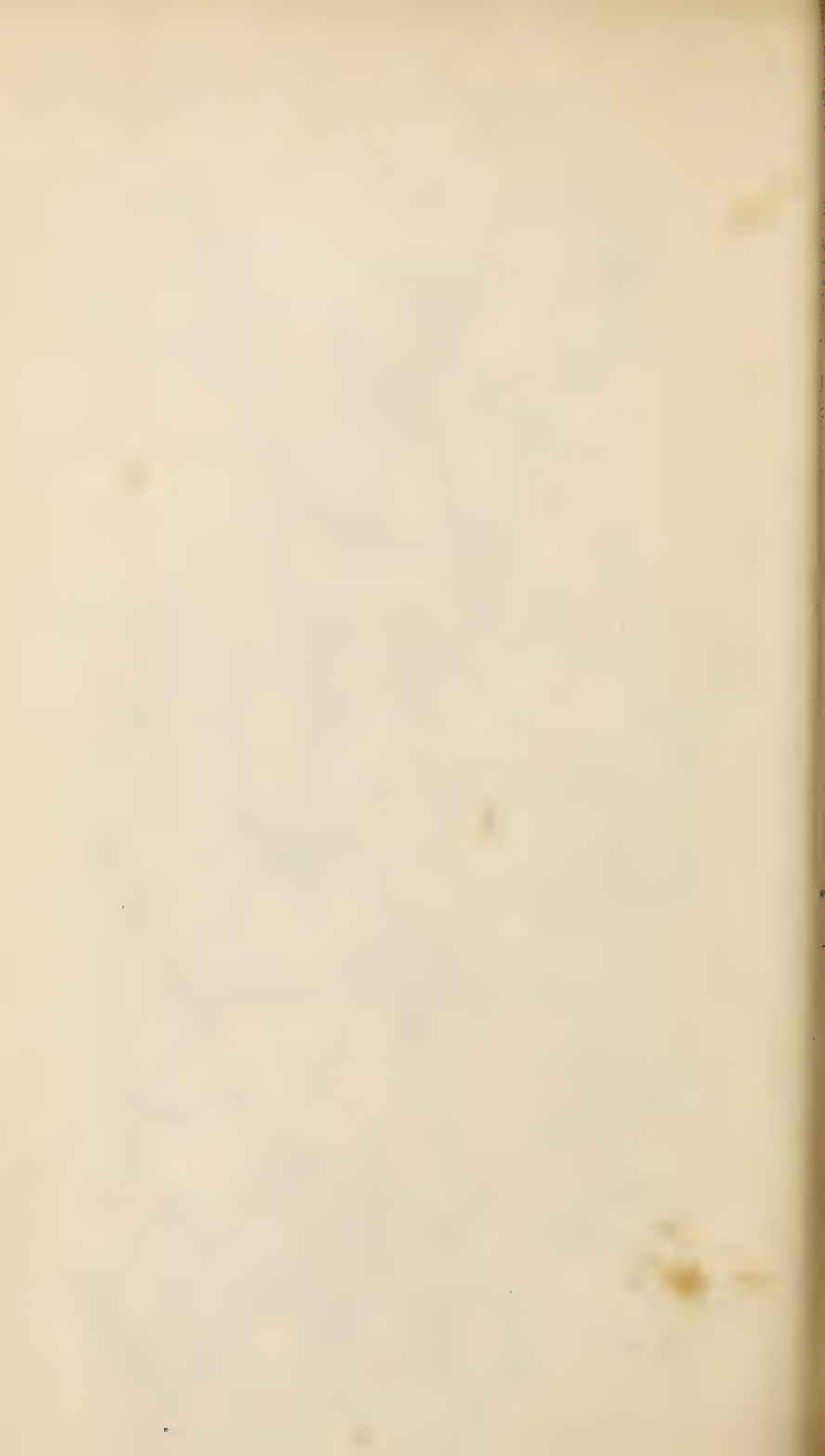
Spinescens, foliis oppositis ellipticis obscure serratis in petiolum brevem attenuatis subtus glaucis, pedunculis axillaribus nutantibus solitariis unifloris, calyce 4-fido, fructu 3-cocco 3-spermo.

HAB. Port Famine, Patagonia. *Capt. King.*

This little shrub has many characters in common with the *Condalia microphylla*, Cav. from Chili: but the size and structure of the flowers and of the fruit are different, and the leaves are much less pointed than in that plant. It is indeed unquestionably a *Colletia*, having all the characters of that genus, unusually leafy it must be confessed; and the leaves are glaucous, or almost white beneath.

Fig. 1. Flower. *f.* 2. The same, laid open. *f.* 3. Fruit. *f.* 4. Fruit cut open transversely, showing the seeds:—*magnified.*





TAB. DXXXIX.

AZORELLA TRIFURCATA. Gærtn.

Densissime cæspitosa, foliis glabris rigidis tripartitis laciniis subæqualibus late subulatis cuspidatis, petiolo dilatato-vaginato filamentis tenuissimis valde deciduis ciliato, umbella subsessili, involucris foliolis parvis subulatis basi coadunatis subciliatis.

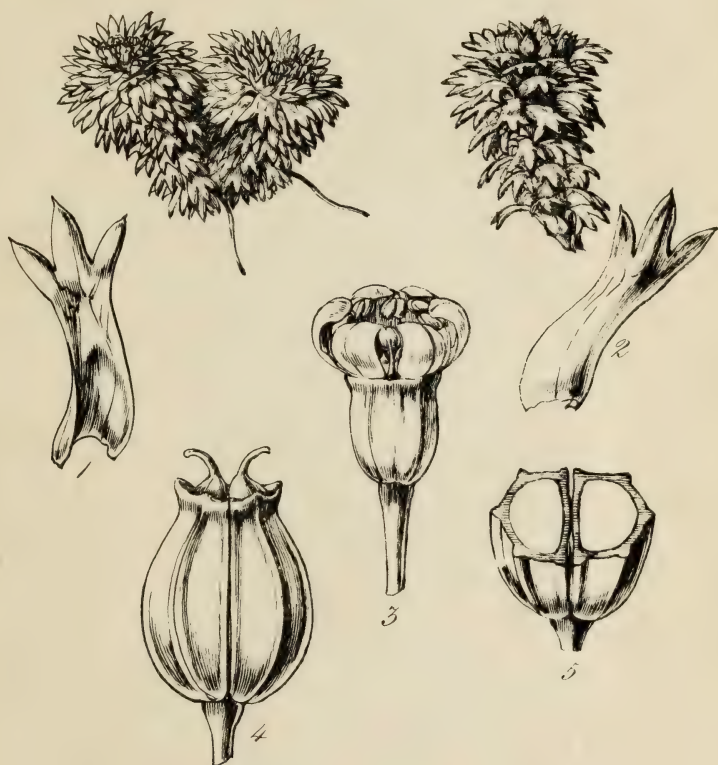
Chamitis trifurcata. Gærtn. *Fruct.* v. 1, p. 95, tab. 22, f. 4. (*sub nom. Ch. tricuspidatæ*).

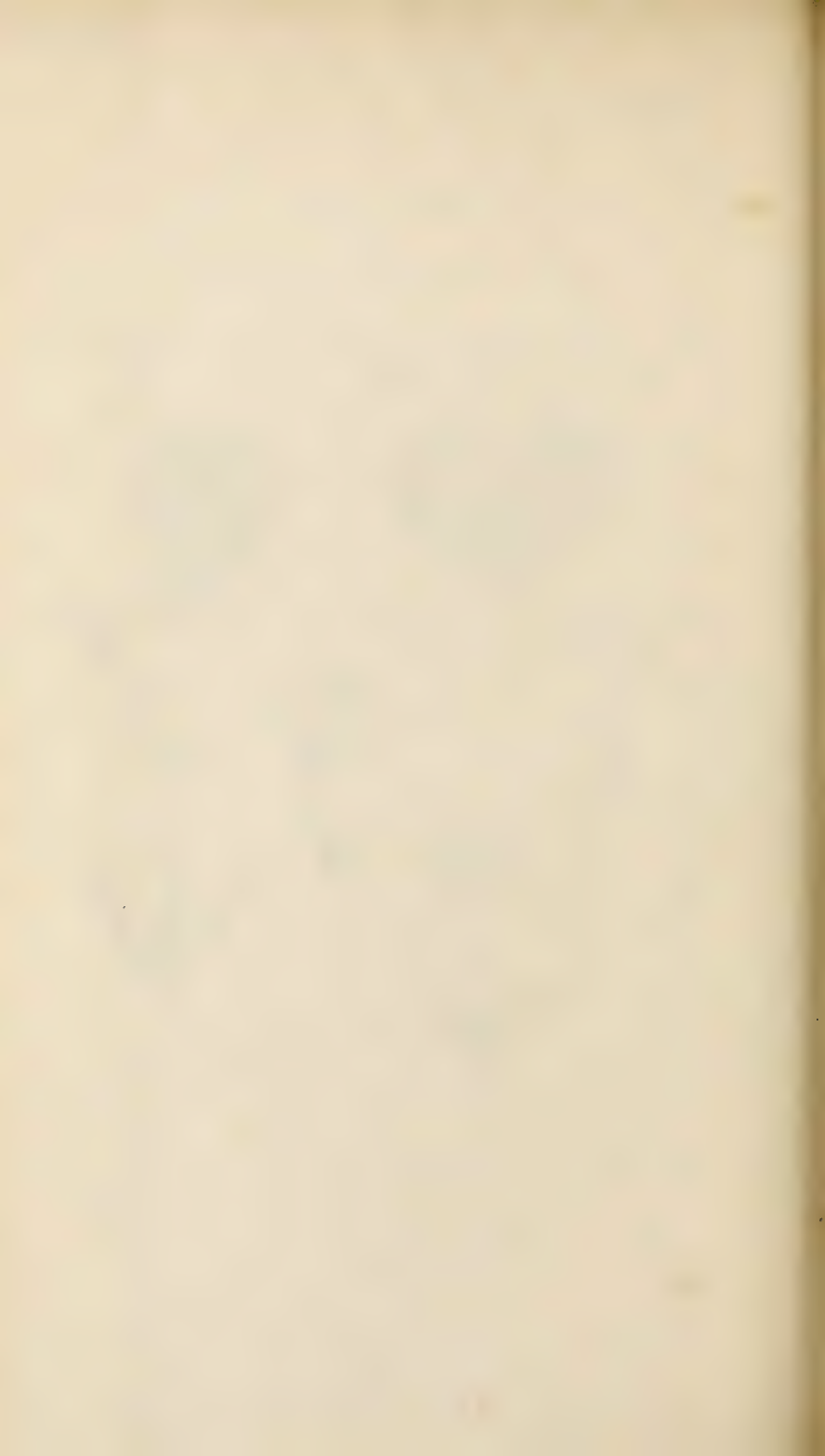
Azorella tricuspidata. Lam. *Illustr.* v. 2, tab. 189, f. 4, b.—h* (*excl. syn.*) Dict. *Suppl.* v. 1, p. 551. (*excl. most of the syn.*)

HAB. Terra del Fuego. Sir Joseph Banks. Straits of Magellan. Captain King.

This little plant is well figured by Gærtner, from specimens in Sir Joseph Banks's Herbarium; the fruit and leaf being exactly characteristic of those of our specimens. This figure seems to have escaped the notice of De Candolle; while by Lamarck and Sprengel, who probably never saw the plant, and the former of whom has given Gærtner's figures, it has been strangely confounded with the *Bolax glebaria*, (See our TAB. CDXCII. of vol. 4). The fruit and leaves are both quite different. Our plant forms very dense tufts; its short branches everywhere clothed with rigid, tricuspidate, spreading or reflexed leaves, quite destitute of pubescence:—the long sheathing bases are, in a young state, and then only, fringed with very slender hairs; the old leaves are perfectly destitute of them. Peduncle very short, not rising above the leaves, bearing a simple umbel of 3-5 flowers, and about as many broadly subulate involucreal leaves, united by their bases, and there minutely fringed. Petals ovate, involute. Fruit quite glabrous, ovate, slightly compressed laterally, scarcely so at the back, so that the transverse section is oval or elliptical. Each mericarp has five stout, nearly equidistant, ribs, the lateral ones at the commissure.

Fig. 1. Front, and—f. 2. back view of a leaf, the marginal ciliæ having fallen away. f. 3. Flower. f. 4. Fruit. f. 5. Section of ditto:—*magnified*.





TAB. DXL.

ESCALLONIA SERRATA. *Sm.*

Glabra, foliis obovatis obtusis serratis costatis aveniis (subtus præcipue), floribus solitariis terminalibus, petalis oblongo-obovatis, ovario semilibero.

Escallonia serrata. Sm. Icon. Ined. 2, t. 31. De Cand. Prodr. 4, p. 3.

Stereoxylon serratum. Poir. Dict. 7, p. 435.

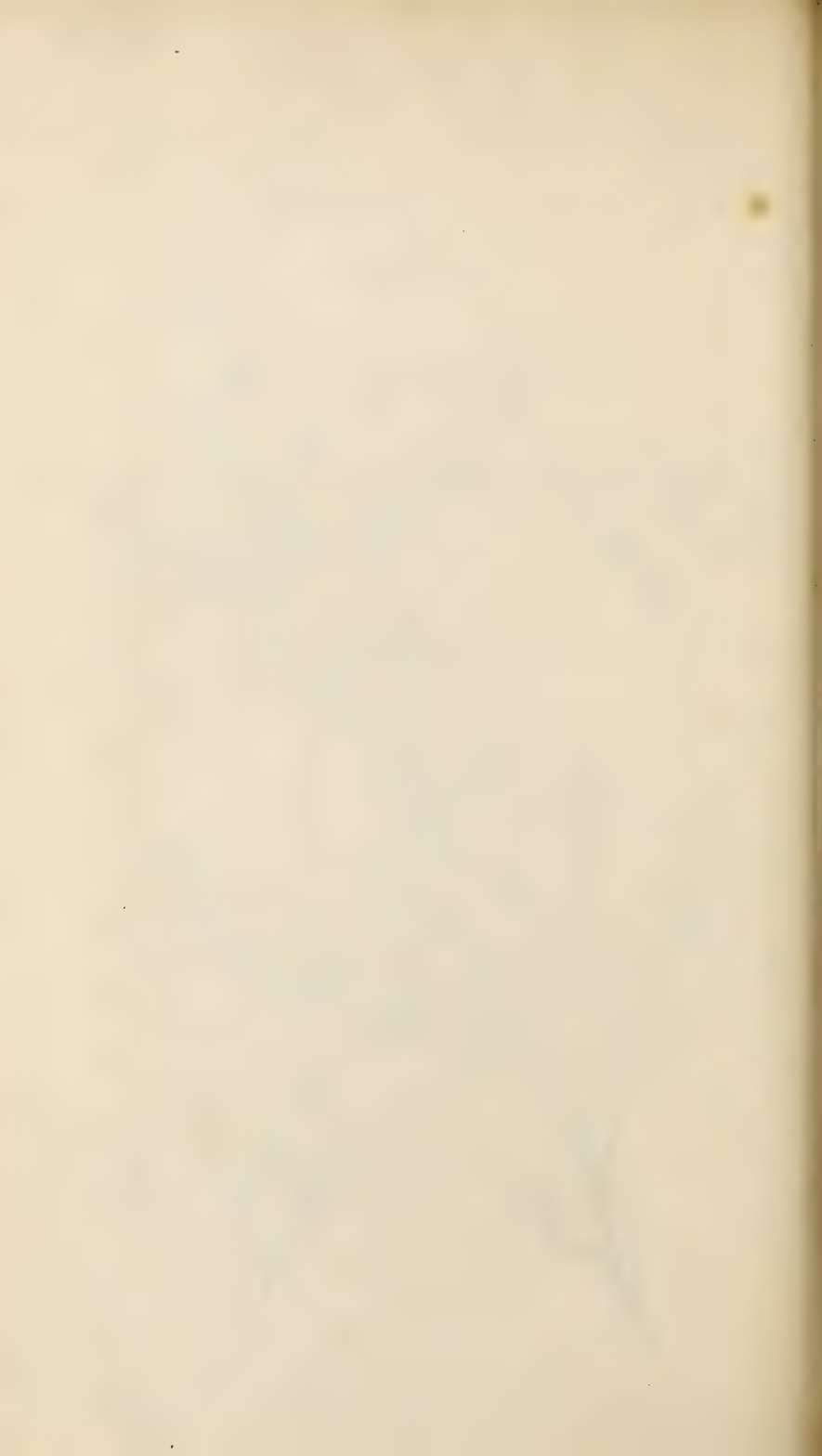
HAB. Straits of Magellan. *Commerson. Terra del Fuego. Menzies. Port Famine. Capt. King.*

A small shrub, with short, flexuose, rigid branches, and leaves which are often in clusters or rosulated, scarcely $\frac{1}{2}$ an inch long, obovate, subcoriaceous, nearly sessile, serrated, obtuse, costate, but except the costa, or midrib, there are no evident veins. At the apex of the branchlets appears a solitary flower, on a short peduncle. Calyx $\frac{1}{2}$ superior, the short obconical tube being incorporated with the ovary; the free part consists of 5 triangular very acute segments. Petals large in proportion to the calyx, oblong-obovate (white) with a central brownish nerve, pinnated with lesser ones. Stamens 5, alternate with the petals, and shorter than they. Anthers nearly oval. Germen, or ovary, with its upper part free, hemispherical. Style short, much shorter than the stamens. Stigma capitate.

The figure of Sir James Smith, above quoted, represents the leaves larger than in our plant.

Fig. 1, 2. Flowers:—magnified.





TAB. DXLI.

AZORELLA FILAMENTOSA. *Lam.*

Caulibus brevibus diffusis, ramis congestis, foliis lanceolatis subspathulatis concavis, petiolo folium æquante inferne dilatato longe ciliato, umbellis subsessilibus.

Azorella filamentosa. Lam. Ill. t. 489, f. 1. Vahl. Symb. 3, p. 47.

De Cand. Prodr. 4, p. 77.

Azorella Chamitis. Pers. Syn. Plant. 1, p. 303. D'Urville Fl. des Isles Malouines, in Mém. Soc. Linn. v. 4, p. 614.

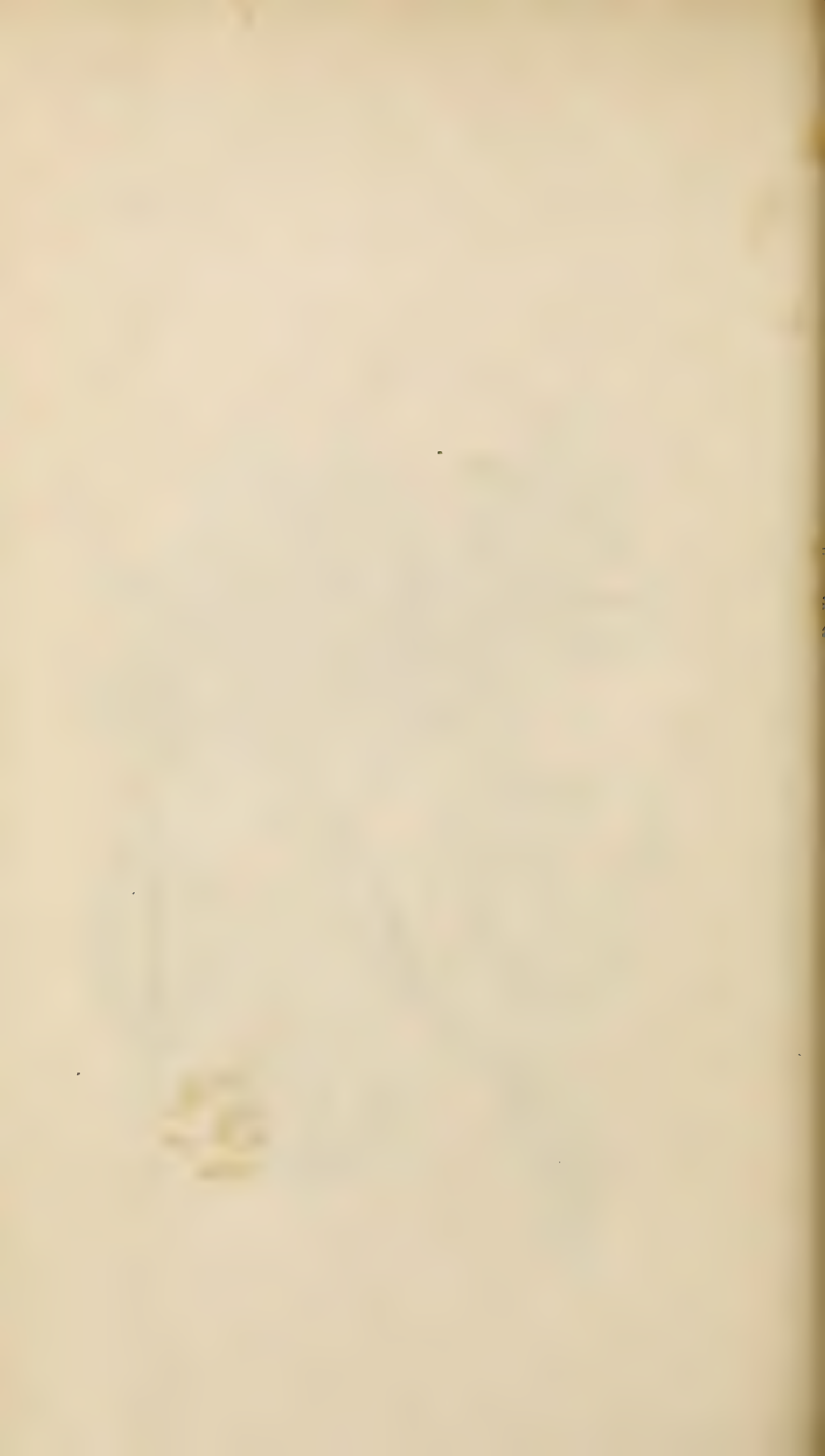
Bolax filamentosa. Spreng. in Schult. Syst. Veget. 6, p. 359.

HAB. Straits of Magellan. *Commerson. Capt. King. Falkland Islands. D'Urville.*

This is only one of several very curious, small, densely tufted, umbelliferous plants, which are peculiar to the temperate and cold climates of the southern hemisphere, and which at first sight are scarcely recognized as belonging to that family. In this the leaves are quite simple, concave, almost cymbiform, as Lamarck describes them, with a petiole equal in length with the leaf, and fringed with very long hairs. Umbels almost sessile, of several short rays, bearing flowers similar to those of the rest of the genus *Azorella*.

Fig. 1. Portion of a branch, with leaves. f. 2. Flower. f. 3. Fruit. f. 4. Fruit cut through transversely:—magnified.





TAB. DXLII.

PODOCARPUS FERRUGINEA. Don.

Foliis distichis pectinatis lineari-falcatis coriaceis uninerviis, flore fœmineo solitario in apicem ramuli proprii multibracteati, fructu juniore ovato-attenuato, receptaculo carnosio nullo, drupa ovali-subsphærica magnitudine nucis avellanæ.

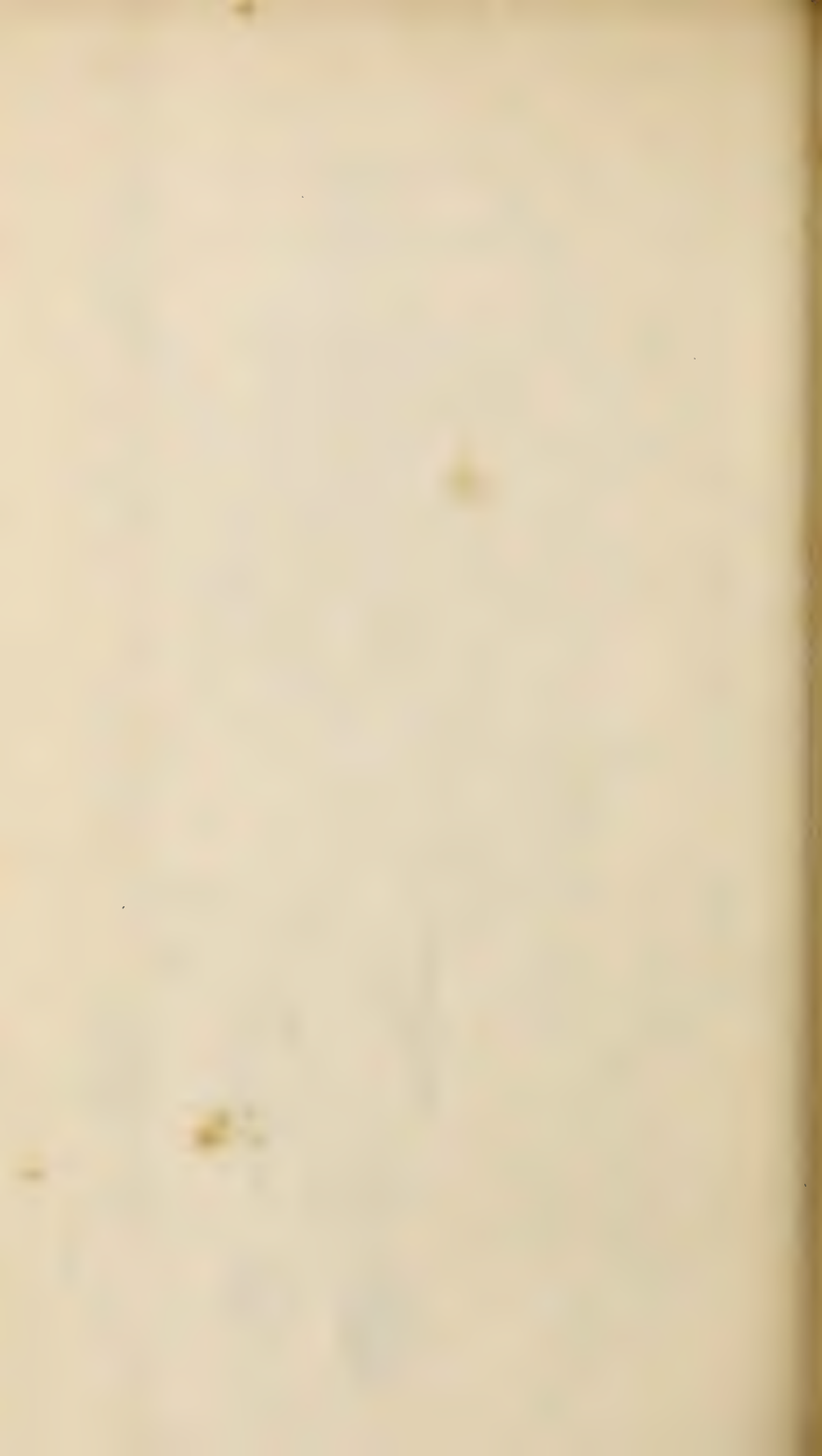
Podocarpus ferruginea. Don, in *Lamb. Pin. App. All. Cunn. in Ann. of N. Hist. v. 1, p. 212.*

HAB. New Zealand. Northern Island. Bennett. Colenso. Dieffenbach. Edgerley. R. Cunningham.

With justice this is named by Mr. Don *ferruginea*; for the dry specimens have a red-brown tinge, by which, as well as the broader and falcate leaves, it is at once distinguished from *P. spicata* (Tab. DXLIII.) which turns black in drying; and still more certainly by the solitary male catkins, and solitary female flower (never arranged in spikes) and large fruit, which is scarlet, and greedily devoured by wood-pigeons. The tree, it is said, attains a height of from forty to sixty feet, with a diameter of four feet in the stem. This is the *Miro* or *Mairi* of the natives. I have to regret a considerable degree of inaccuracy in the internal structure of the female flower and fruit, as here represented, which was not detected till too late to be corrected: Figs. 4 and 10 should therefore be considered as cancelled. In the former, especially, the descending ovule should be made to reach an opening at the margin near the base. But the precise structure of the flowers and fruit of this group of *Coniferæ* can only be really satisfactorily delineated from recent specimens.

Fig. 1. Male catkin. *f. 2.* Outer, and—*f. 3.* inner view of an anther. *f. 2 bis*, (upper right-hand figure) female flower on its bracteated branch or pedicel. *f. 4.* Section of the female flower (inaccurate). *f. 5.* Drupe, and—*f. 6 and 7*, the same laid open (*nat. size*). *f. 8.* Seed, the outer coat being removed (*nat. size*). *f. 9.* The nucleus. *f. 10.* Seed cut through vertically (inaccurate); all but *f. 5-8* more or less *magnified*.





TAB. DXLIII.

PODOCARPUS SPICATA. Br.

Foliis undique insertis distichis linearibus obtusis uninerviis subtus siccitate plerumque glaucis, amentis masculis floribusque fœmineis spicatis, fructu juniore ovato-attenuato, receptaculo carnoso parvo squamæformi, drupa subrotunda magnitudine pisi sativi.

Podocarpus spicata. Br. in *Horsf. Plant. Javan.* p. 40.

Dacrydium taxifolium. Banks and Soland. *Lamb. Pin. Suppl.*

Dacrydium? Mai. *All. Cunn. in Ann. Nat. Hist.* v. 1, p. 213.

HAB. New Zealand. Northern Island. In forests, at some distance from the sea-coast. *All. Cunningham, R. Cunningham, Colenso, Bennett, Edgerley, Dieffenbach.*—*Mai* or *Metai* of the natives.

This noble tree is said by Mr. Allan Cunningham to attain a height of eighty feet, producing a durable wood, or red pines, dark as cedar, but brittle, and furnishing very indifferent spars.

The three New Zealand species of *Podocarpus* that are most nearly allied to each other, are *P. Totara* (figured in *Lond. Journ. of Bot.* v. 1, Tab. XIX.), *P. ferruginea* (see our preceding plate), and the present. But even without their fructification they may easily be recognized; the first having the largest, the broadest, almost lanceolate, and very acute foliage, drying to a very yellow hue. *P. ferruginea* has smaller, linear leaves, curved more or less like a sickle, pectinated by their very distichous direction, and turning reddish-brown in drying. Our *P. spicata* has narrower, straighter, very obtuse leaves, becoming almost black in desiccation, and generally glaucous beneath. The fructification is very peculiar; the male catkins and female flowers are all arranged on spikes of considerable length; in this respect, the female inflorescence approaching that of *Phyllocladus*. The drupes are much smaller than in the *P. ferruginea*, and I believe equally greedily devoured by birds.

Fig. 1. Female flower, or young fruit:—*magnified.* *f. 2.* Drupe, and—*f. 3.* the same laid open:—*nat. size.* *f. 4.* Drupe, the outer coat being removed. *f. 5.* The same laid open. *f. 6.* Male catkins. *f. 7.* Outer, and *f. 8.* inner view of *antheriferous scale*:—*magnified.*





TAB. DXLIV.

PODOCARPUS? BIFORMIS.

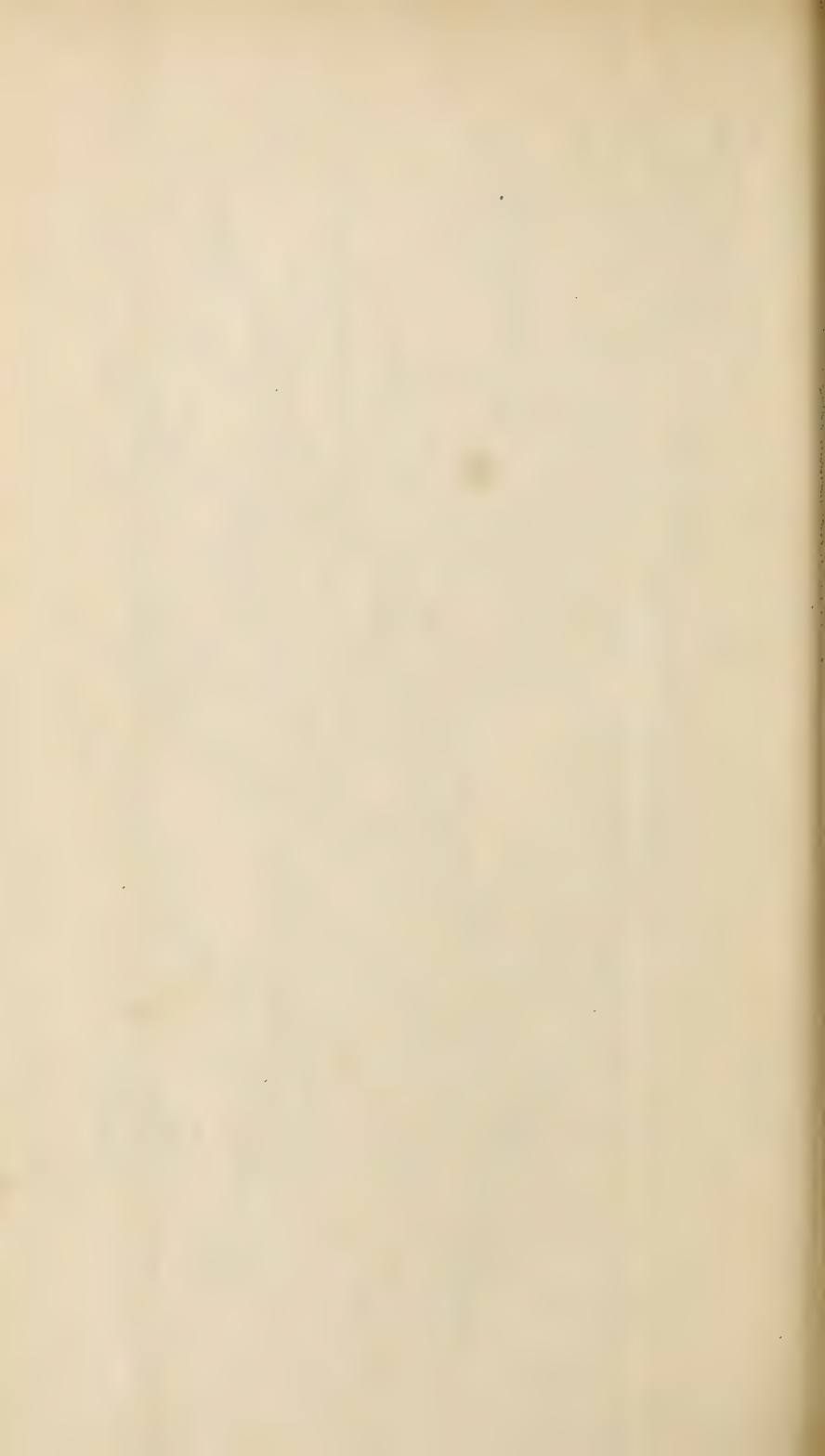
Foliis undique insertis, aliis uncialibus laxis patentissimis seu reflexis linearibus acutiusculis supra planis dorso obscure carinatis, aliis minimis arctissime imbricatis ovato-rhombeis opacis obtusis medio affixis dorso superne præcipue carinatis.

HAB. New Zealand, probably the Southern Island. *Mr. Menzies: Herb. Banks and Hook.*

I have seen only two specimens of this very remarkable plant; the one, here figured, in which the upper or younger branches in general bear minute, short, and closely imbricated leaves; and that in the Banksian herbarium, in which the lower and older portions have that character, and the upper bear the large and spreading kind of foliage. These two sorts of leaves are so different, that if they grew on two separate plants, no one could suppose them to belong to one and the same species. In many Junipers, in *Dacrydium elatum*, and several allied genera, the leaves do vary remarkably in different stages of growth, but I know of none in which the two forms of leaf are so totally unlike each other, as in the present case. The plant resembles *Lycopodium Phlegmaria*, with its branched spikes of fructification. I regret that neither of the specimens offers any fructification; but the plant is too interesting to remain longer unpublished in our Herbaria.

Fig. 1. Upper, and—*f. 2.* Underside of one of the larger leaves. *f. 3.* Apex of a branch, with the smaller leaves. *f. 4.* Under side of a leaf, from the same:—*magnified.*





TABS. DXLV.—DXLVI.

OURISIA MACROPHYLLA. (Sect. DICHROMA).

Repens, foliis longe petiolatis oblique cordatis crenatis, scapo (petiolisque hirsutis) diphylo, foliis oppositis ovatis serratis sessilibus, umbella prolifera, involucro suboctophyllo, foliolis lanceolatis serratis, calyce obliquo corollaque hirsutis.

HAB. Mount Egmont, N. Zealand. *Dr. Dieffenbach.*

This is the first time* that any species of the genus *Ourisia* has been discovered in New Zealand. Mr. Brown detected the *O. integrifolia* in Van Diemen's Land; all the rest are natives of Chili, or the southern regions of S. America, with the exception of the *O. Nepalensis* of Mr. Bentham. From all those hitherto described, the present is at once distinguished by its large size and the umbellate flowers. It is found at a great elevation upon Mount Egmont, on the confines of perpetual snow; and there cannot be a question but that, if this and the other lofty mountains of N. Zealand were well explored, they would produce a rich harvest of novelty.

Fig. 1, 2. Flowers. *f.* 3. Corolla laid open. *f.* 4, 5. Anther. *f.* 6. Pistil. *f.* 7. Section of the germen. *f.* 8. Capsule bursting open:—*magnified.*

* A second and very different species of *Ourisia* will, however, soon appear in this work.





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TAB. DXLVII.

PODOCARPUS? DIEFFENBACHII.

Foliis oppositis ovatis obtusis concavis crassis nitidis bi-seu quadrifariam imbricatis basi connatis vaginatis, junioribus margine villosio-lanatis.

HAB. Queen Charlotte Sound, New Zealand. *Dr. Dieffenbach.*

Of the genus of this I must remain in doubt, until some traveller in the less frequented districts shall have the good fortune again to find this tree, and to detect its fructification. The present is the only specimen that has been collected. Its leaves are very remarkable, always growing in exactly opposite pairs, connate and decurrent, so as to form a loose sheath around the stem of considerable length, and the stem is thus perfoliate; they are imbricated in four ranks on the older branches, generally in two on the younger ones.

The Coniferous trees of New Zealand are doubtless among the most valuable and interesting of the vegetable productions of that remote group of islands. They constitute the highly prized timber of the country; and I could not but wish, that several of the species should be more clearly defined, than has previously been the case, and figured. The present volume of the *ICONES*, and the first volume of the *London Journal of Botany*, will now be found to contain figures of all the New Zealand Coniferae which had not been represented before: and during the brief course of my investigation of the species, I have been enabled to add no less than three new ones to the catalogue of those already known. I shall here subjoin a list of the species, and references to the figures, by which it will be seen that there is only one (*Podocarpus dacrydioides*) that may not now be found in some well-known, or readily accessible British author:—

1. *Dammara australis*, *Lamb.* (*Cowie or Cowdie*) *Lamb. Pin. ed. 2, tab. 55. Loud. Arboret. Brit. v. 4, p. 2449. f. 2310.* 2. *Phyllocladus trichomanoides*, *Don. TAB. DXLIX. DL. and DLI. of the present volume.* 3. *Dacrydium cupressinum*, *Sol. in Cook's 2nd Voy. v. 1, tab. 51. Lamb. Pin. tab. 69.* 4. *Dacrydium Colensoi*, *Hook. TAB. DXLVIII of the present vol.* 5. *Podocarpus spicata*, *Br. TAB. DXLIII. of the present volume.* 6. *Podocarpus ferruginea*, *Don. TAB. DXLII. of the present volume.* 7. *Podocarpus Totarra*, *Don. Hook. in Lond. Journ. of Bot. v. 1, tab. 19.* 8. *Podocarpus dacrydioides*, *A. Rich. (P. thujoides, Br. Dacrydium thujoides, Banks and Sol. mst. D. excelsum, Don. Rich. Fl. Nov. Zel. tab. 39).* 9. *Podocarpus? biformis*, *Hook. TAB. DXLIV. of the present volume.* 10. *Podocarpus? Dieffenbachii*, *Hook. (the present plate.)* 11. *Thuja Doniana*, *Hook. in Lond. Journ. of Bot. v. 1, tab. 18.*—No doubt, future researches in New Zealand will bring to light more novelties in this beautiful and important family of plants.

Fig. 1. Branch of Podocarpus? Dieffenbachii, slightly magnified. f. 2. Leaves, more magnified.



TAB. DXLVIII.

DACRYDIUM COLENZOI.

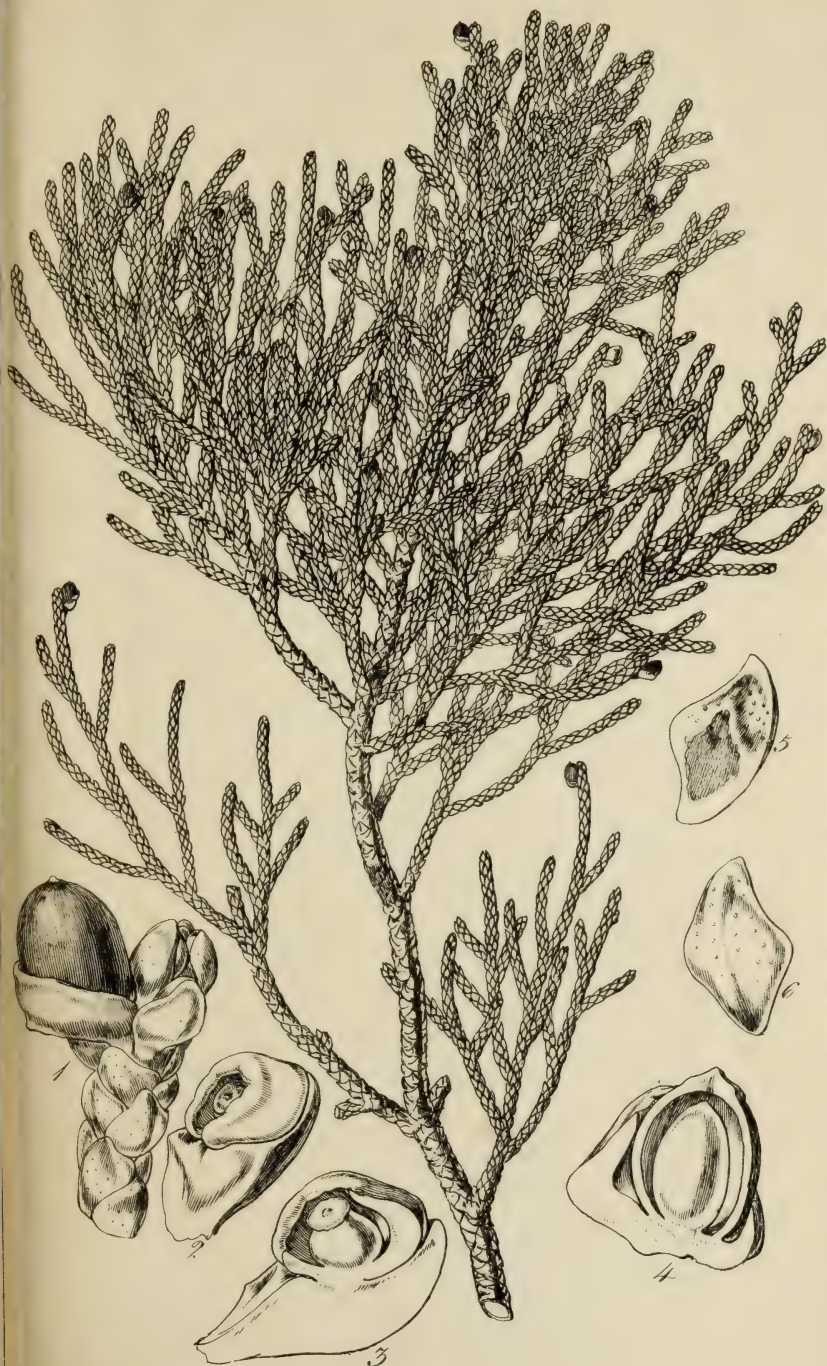
Foliis in ramos vetustos undique, in ramulos quadrifariam, dense imbricatis nitidis minute resinoso-punctatis ovato-rhombeis obtusis dorso carinatis intus planiusculis medio affixis, drupa ovali umbonato.

HAB. High hills near the eastern coast of the Northern Island of New Zealand. *Wm. Colenso, Esq.* (n. 27); detected in 1841.

The very interesting account of the discovery of this new *Dacrydium*, for such I think it will be allowed to be, by Mr. Colenso, is given in the 1st vol. of the London Journal of Botany, p. 301. It is a tree 50 feet high, with a trunk $2\frac{1}{2}$ feet in diameter, unquestionably of great rarity in the island; for Mr. Colenso was led to a very long and toilsome search for it, on hearing that it was so much prized by the natives, on account of its indestructible quality, that whenever one was found, it was reserved to make the coffin of a chief; and there is a tradition among the people, that one of their illustrious demi-gods, *Taue*, hid it on account of its great value. I am anxious that in the specific name it should commemorate its amiable discoverer, whose botanical researches in his adopted land, and his kindness and attention to botanists visiting the country, are beyond all praise; and, together with his still more valuable missionary labours, richly entitle him to be considered one of the greatest benefactors of New Zealand.

The bark of the trunk Mr. Colenso describes as deciduous, but not fibrous, as in the *Totarra*; here it is rather scaly and brittle, as in the *Dammara australis*. The foliage bears a considerable resemblance to the yet undescribed Huon Pine of Van Diemen's Land, of which the fructification is still unknown: but there are some discrepancies in the only specimens we have hitherto seen of the latter:—and we must not conceal, that the leaves are very similar to the smaller foliage of our *Podocarpus? biformis*. There are, however, no traces of two forms of leaves in *P. Colensoi*.

Fig. 1. Ripe fruit. *f. 2.* Young fruit. *f. 3.* The same; the fleshy receptacle cut through. *f. 4.* The young fruit, as well as the receptacle, cut through. *f. 5.* Inner view of a leaf, with its point of attachment. *f. 6.* Outer view of ditto:—*magnified*.



TABS. DXLIX.—DL.—DLI.

PHYLLOCLADUS TRICHOMANOIDES. *Don.*

Foliis verticillatis pinnatis proliferis, foliolis oblique cuneatis coriaceis lobato-pinnatifidis penninerviis, lobis rotundatis truncatis dentatis, rachi alata.

Phyllocladus trichomanoides. *Don, in Lamb. Pin. ed. 2, App. Rich. Conif. p. 23, and 129, t. 3. All. Cunn. Bot. New Zeal., in Ann. Nat. Hist. v. 1, p. 211.*

Phyllocladus n. sp. Don, in Lamb. Pin. App.

Phyllocladus rhomboidalis. *A. Rich. in Voy. de l'Astrol. v. 1, p. 363 (excl. syn.)*

HAB. New Zealand; Northern Island. Banks of the Thames, Bay of Islands. Wangaroa, &c. *All. Cunningham. Mr. Colenso. Edgerley. Dieffenbach, &c.*

This is an extremely distinct species of *Phyllocladus*, from the original one of the elder Richard (*P. asplenioides*), a native of Van Diemen's Land: though by the younger Richard, and others, strangely confounded with it. It is called *Tauehaha* by the natives, and forms a tree of straight tapering growth, about sixty feet in height, with a trunk three feet in diameter. Its mode of growth is very peculiar. What I have here called pinnated leaves, are produced in whorls; but the rachis shoots out at the extremity, forms a branch, and produces another whorl of leaves at the extremity, which goes on increasing in a similar manner. The wood is close-grained, smelling strongly of turpentine, and is much valued for all kinds of outside work, while the bark is employed by the natives for dyeing a red colour.

The male and female flowers appear to be on different trees; or, perhaps, on different branches of the same tree. Male catkins cylindrical, on bracteated pedicels, clustered. Anthers sessile, densely imbricated, the lower ones acute, the upper ones acuminate, serrated at the point; all 2-celled, the cells opening laterally. The female flowers are in fleshy, toothed or serrated spikes or catkins: within each tooth or serrature of the rachis is a young urceolate fruit, open at the mouth: this rachis seems to develop itself into a pinnated leaf, as the fruit advances to maturity, as shown in our figures, TAB. DLI.

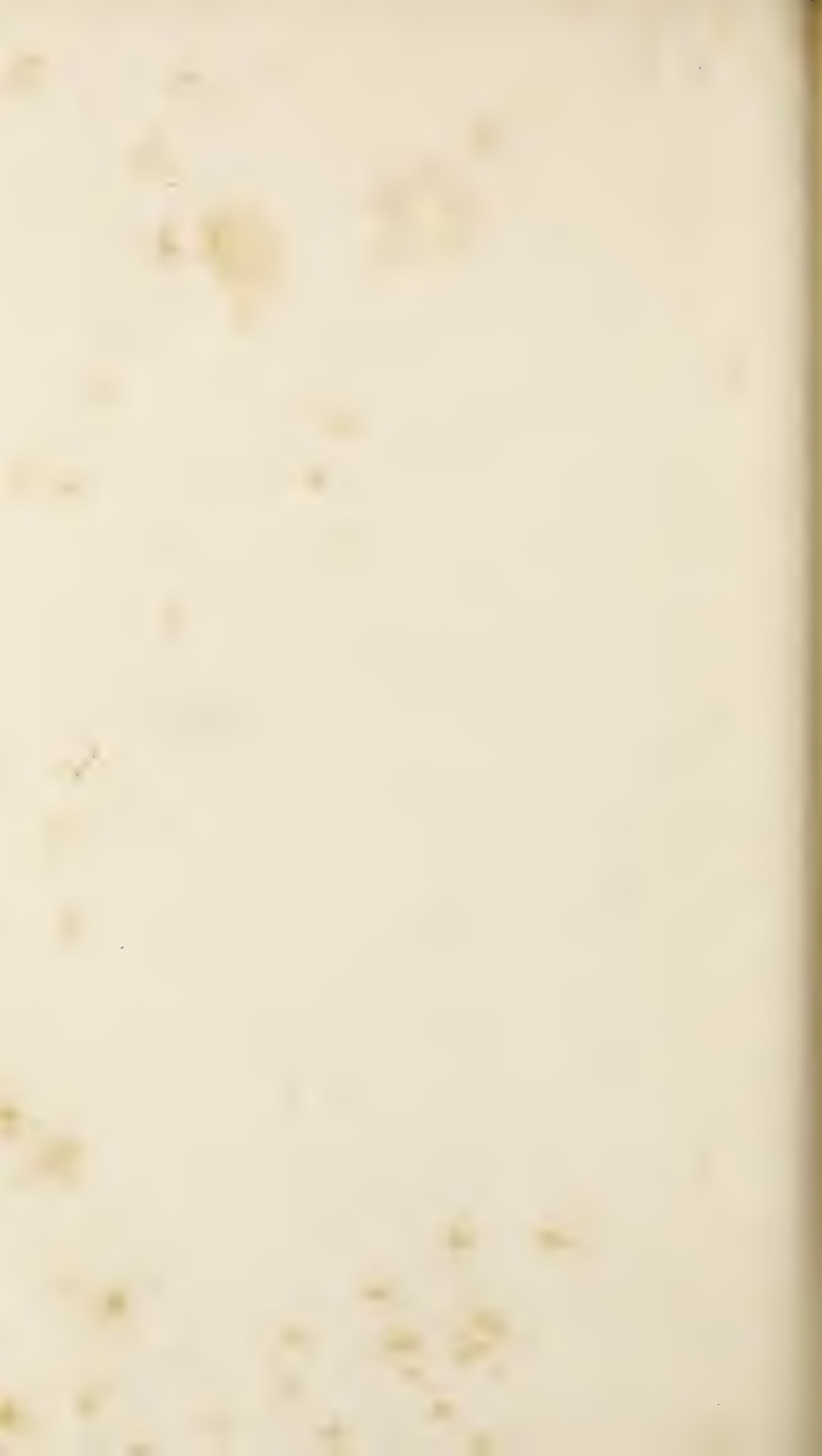
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(The references to the *flowers* and *fruit* will be given with TAB. DLI.)









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OR

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WITH

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OF

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SELECTED FROM THE AUTHOR'S HERBARIUM.

By SIR WILLIAM JACKSON HOOKER, K.H.,

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MDCCCLXIII.

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TAB. DLI.

PHYLLOCLADUS TRICHOMANOIDES. Don.

(See the preceding Description).

The present figure represents the flowers and fruit of the *Phyllocladus trichomanoides*.

Fig. 1. Branch, with male flowers; *nat. size.* *f. 2.* Male catkin. *f. 3.* Inner face of an anther, from the upper part of the catkin. *f. 4.* Outer face of an anther, from the lower part of the catkin; *magnified.* *f. 5.* Branch, with female flowers; *nat. size.* *f. 6.* Female spike. *f. 7.* Section of a portion of the rachis, showing two female flowers; one laid open. *f. 8.* Female flower more advanced; consisting of an urceolate covering, enclosing the young fruit. *f. 9.* The same laid open; *magnified.* *f. 10.* Branch, with mature fruit; *nat. size.* *f. 11.* Portion of the rachis, with a fruit protruding from its urceolate, thickened, fleshy covering. *f. 12.* The urceolate covering laid open to show the fruit, with its cup-shaped receptacle. *f. 13.* The receptacle and fruit, cut through vertically. *f. 14.* Entire fruit removed from the receptacle:—*magnified.*





TAB. DLII.

CASSINE MAUROCENIA. Willd.

Foliis subsessilibus coriaceis crassis lato-ellipticis ovatis sub-ovatisve obtusis brevissime petiolatis marginibus revolutis, pedicellis axillaribus aggregatis petiolo longioribus, calycis foliolis fimbriatis, staminibus petalis dentatis triplo longioribus.

Cassine Maurocenia. *Linn. Sp. Pl.* p. 385. *Willd. Sp. Pl.* 1, p. 1493. *Ait. Hort. Kew. ed. 2*, p. 170. *Ræm. et Sch. Syst. Veget.* v. 6, p. 466. *Spreng. Syst. Veget.* v. 1, p. 939.

Maurocenia Frangularia. *Mill. Dict.*

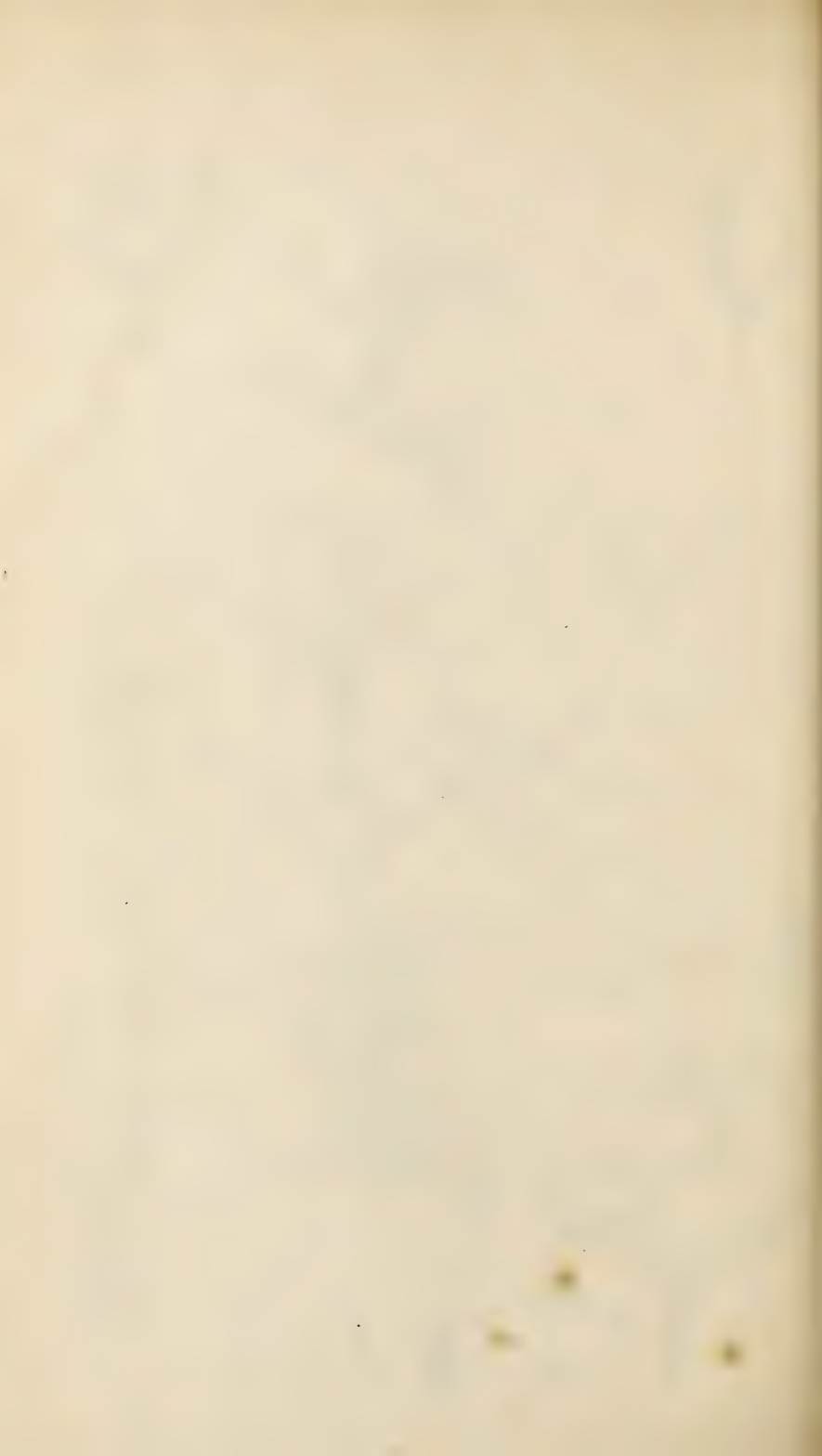
Frangula sempervirens, &c. *Dill. Elth.* 146, t. 121, f. 147.

HAB. Cape of Good Hope. *Thunberg, Bowie, &c.*

There is a very good figure of this little-known plant in Dillenius' *Hort. Elthamensis*, it having been introduced to England from South Africa so early as 1690. It makes a handsome greenhouse shrub, 4-5 feet high; but I have never seen a living plant in this country, save that in the Royal Botanic Gardens of Kew. It is the "Great Hottentot Cherry" of South Africa.

Fig. 1. Flower. *f. 2.* Calyx and disk; the ovary cut through transversely. *f. 3.* Ovary on the disk. *f. 4.* Drupe; *nat. size.* *f. 5.* The same, cut through transversely. *f. 6.* The same, cut through vertically. *f. 8.* The seed laid open:—all but figure 4, *magnified.*





TAB. DLIII.

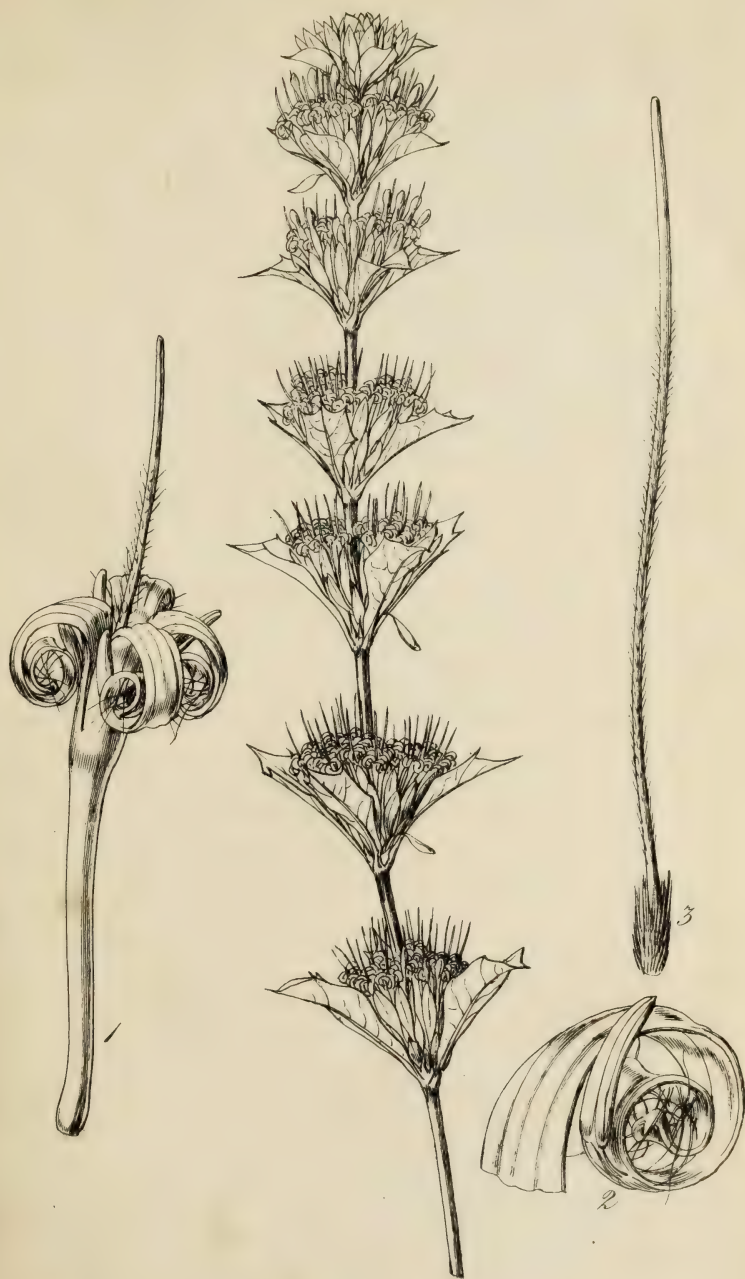
LAMBERTIA ILICIFOLIA. *Hook.*

Involucris 7-floris, foliolis interioribus perianthii apice pilosi tubum æquantibus, stylis pilosis, folliculis —?, foliis glabris obovatis cuspidatis basi attenuatis remote spinoso-dentatis subtus reticulatim venosis.

HAB. Swan River, Australia. *Mr. James Drummond.*

Of the genus *Lambertia*, 6 species have been described by Mr. Brown; all, except *L. formosa*, (which is from Port Jackson) are natives of the southern extremity of Australia. Dr. Lindley has published a 7th species, from Swan River, and I have now the pleasure to add an 8th, also from this latter settlement. The only specimen yet sent is that here represented, and it came in a letter. To this plant allusion is made, at page 398 of the 1st vol. of the "London Journal of Botany," where it is said: "This proves to be a new and very distinct species of *Lambertia*, of which a scrap had been sent in a letter, enough to identify the fact, and to gratify, in a very high degree, the late eminent Botanist whose name it bears, while on his dying-bed, and when he had scarce sufficient strength to hold the specimen in his hand."

Fig. 1. Flower. *f. 2.* Segment of the perianth, with its stamen. *f. 3.* Pistil:—*magnified.*



TAB. DLIV.

A. HEIMIA GRANDIFLORA. B. C. HEIMIA SALICIFOLIA.

It is not that the plants here represented are novelties, or even unfigured in books; but they are introduced for the sake of illustrating their specific distinctions, which appear to have escaped the notice of previous writers.

1. *Heimia grandiflora*; calycis dentibus omnibus patentissimis. FIG. NOSTR. A.—*Heimia salicifolia* var. *grandiflora*; *Lindl. Bot. Reg.* 1841, *tab.* 60, (figure excellent) excluding the synonyms.

HAB. South Brazil; *Sellow, in Herb. Nostr.* Buenos Ayres, and Rio Jacuray, Prov. of Rio Grande; *Tweedie.* La Punta del Sauce, Province of Cordova. *Dr. Gillies.*

This is a truly beautiful plant, and I have never found the open character of the calyx to vary; it is alike spreading before and after inflorescence. Mr. Tweedie observes, from the large, spreading, yellow, sun-like flowers, it is called in Rio Grande, “*Abro Sol*,” and that it is used, strewed in the houses, to put away fleas, “of which there are plenty.”

A. Portion of a flowering branch; *nat. size.* Fig. 1. Calyx (after flowering): *magnified.*

2. *Heimia salicifolia*; calycis dentibus interioribus post anthesin conniventi-clausis. FIG. NOSTR. B. C.

α. floribus majoribus, ovario apice subtrilobo, foliis lato-lanceolatis. FIG. NOSTR. B.—*Heimia salicifolia.* *Link et Otto, Ic. Pl. Berl. tab.* 28. *Sweet Brit. Fl. Gard. v. 3, t. 390.* *Nesæa salicifolia.* *H. B. K. Nov. Gen. et Sp. v. 6, p. 192.*

HAB. Mexico. Sides of the volcanic mountain of Jorullo; *Humboldt and Bonpland.* Oaxaca; *Andrieux, (in Herb. nostr.)* Texas; *Plotz.*

- β. foliis angustioribus, floribus minoribus, ovario globoso. FIG. NOSTR. C.

HAB. Rio Jacuray; *Tweedie.*

This var. is scarcely deserving of notice but as a transition to the next.

- γ. floribus multo minoribus, ovario globoso, foliis linearibus.

H. myrtifolia. *Cham. et Schlecht. in Linnæa, 2, p. 347.*

HAB. Tropical Brazil, and South Brazil; *Sellow.*

Messrs. Chamisso and Schlechtendal distinguish this species “*floribus subsessilibus, capsula globosa:*” and certainly the authentic native specimens possess peculiarly narrow leaves: but I find none of these characters are constant, and all these vars. have the closed segments of the calyx.





TAB. DLV, DLVI.

LOBELIA PHYSALOIDES. *A. Cunn.*

Suffruticosa, glabra, caule anguloso-subramoso, foliis ovatis v. oblongo-ovatis duplicato-serratis longe petiolatis, racemis terminalibus subnutantibus, calycis laciniis linearibus integris corollæ $\frac{1}{4}$ -longitudinem vix æquantibus, capsula globosa torulosa.

Lobelia physaloides. *A. Cunn. Bot. of N. Zeal. in Tayl. Ann. Nat. Hist. v. 2, p. 50. De Cand. Prodr. v. 7. Add. p. 785.*

HAB. In damp woods at Wangaroa, Matauri, &c. Bay of Islands, New Zealand. *A. and R. Cunningham. Mr. Colenso.*

“Planta (in horto) vix ad basin suffruticosa, 2-3-pedalis, ramulis rotundato-angulatis, purpureo-luridis. *Folia* alterna, ovata, acuta, valde prominenti-venosa, petiolata, 3-4 uncias longa, inæqualiter serrata, serraturis glanduloso-callosis, petiolis biuncialibus, supra canaliculatis basi incrassatis decurrentibus. *Racemi* divisi, 6-8-(multi-)flori. *Pedunculi* alterni, unciales, bracteis foliaceis linearibus suffulti. *Calycis* laciniæ lineari-lanceolatæ, subulatæ, acutæ, corolla plus duplo (triplove) breviores. *Corolla* cærulea, unciam (et ultra) longa, laciniis lanceolatis, attenuatis, lineatis, stamina æquantibus. *Antheræ* exsertæ, apice penicillatæ. *Stigma* dilatatum, bilobum, lobis rotundatis supra convexis glabriusculis, subtus concavis dense villosis (?).” *A. Cunn.*

Fig. 1, 2. Flowers :—magnified.





TAB. DLVII.

MYRTUS BULLATA. *Sol.*

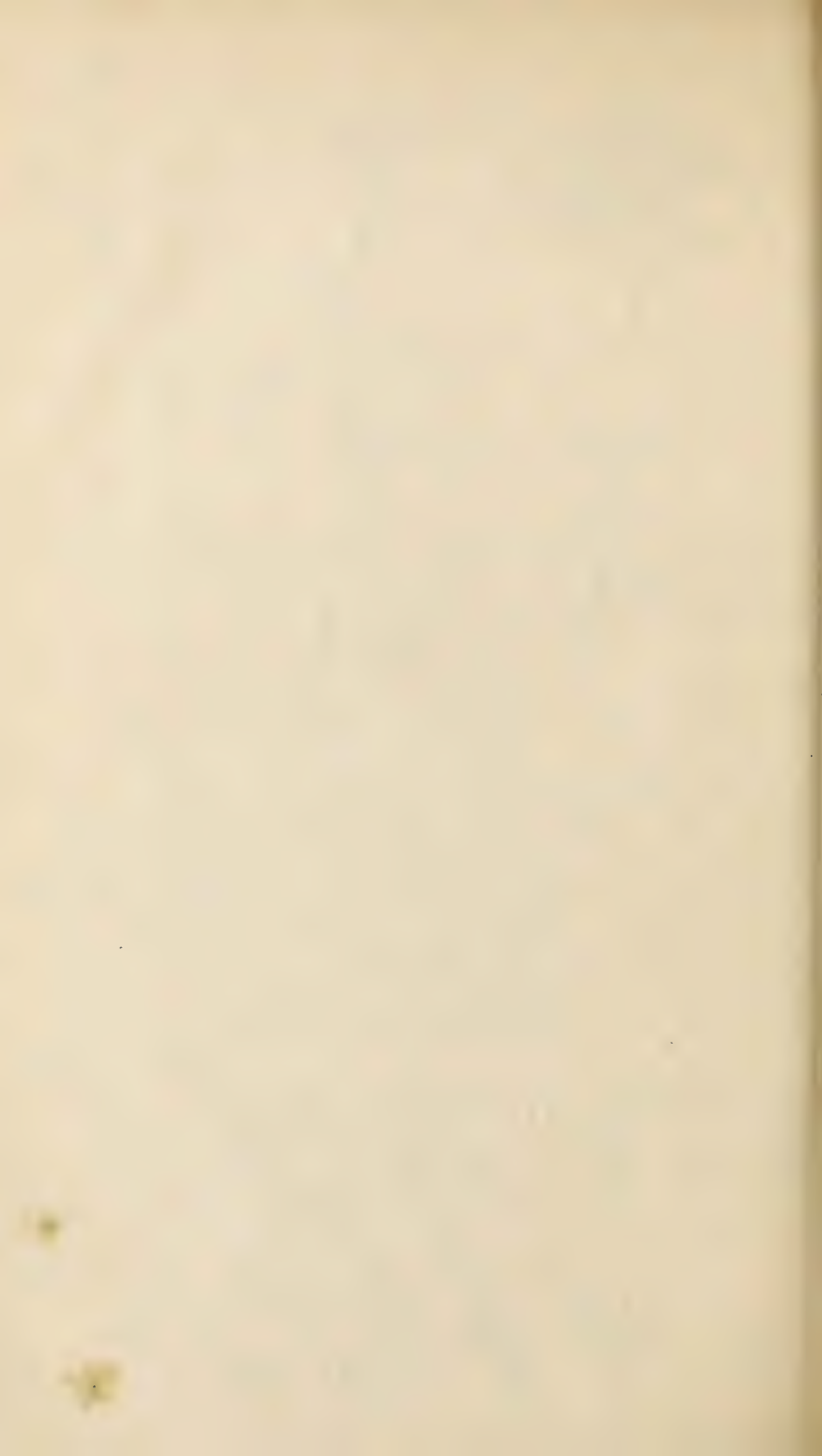
Foliis ovatis brevi-petiolatis acutis alte bullatis supra glabris subtus ramulisque pubescentibus, pedunculis axillaribus solitariis unifloris apice bibracteatis, calycibus 4-lobis petalisque rotundatis concavis extus verruculatis, bacca globosa verruculata lobis persistentibus coronata.

HAB. New Zealand, Northern Island. *Sir Joseph Banks, A. and R. Cunningham, Colenso, Dieffenbach, Dr. Sinclair, Edgerley.*

Apparently a common and extremely well-marked species of Myrtle, found in the Northern Island of New Zealand, at once distinguishable by its singularly blistered leaves, and its calyx and corolla covered externally with minute warts. Reduced as the genus *Myrtus* very properly now is, the present seems well to correspond with the marks given by De Candolle, as characteristic of it, in his "Mémoire sur la famille des Myrtacées;" a posthumous work, recently edited by his son. The seeds are arranged in double rows, in each of the two cells of the fruit.

Fig. 1. Flower, expanded. *f.* 2. Flower-bud, and calyx with pistil. *f.* 3. Section of ovary. *f.* 4. Fruit; *nat. size.* *f.* 5. The same, cut through transversely. *f.* 6. Seed. *f.* 7. Seed laid open. *f.* 8. Embryo:—all but figure 4, more or less *magnified.*





TAB. DLVIII.

QUINTINIA SERRATA. *A. Cunn.*

Foliis lato-lanceolatis sinuato-serratis supra farinoso-squamatis
subtus fusco-punctatis, racemis axillaribus multifloris folium
æquantibus.

Quintinia serrata. *A. Cunn. in Tayl. Ann. Nat. Hist. v. 2,*
p. 356.

HAB. New Zealand. Shores of the Bay of Islands. *A. Cun-*
ningham. Colenso.

The genus *Quintinia* was founded by Alphonse De Candolle, on a plant of Sieber's, discovered in New Holland, and of which a figure of the flowers and immature fruit is given by Endlicher, in the Vol. of the "*Flora*" for 1832, page 389. With that genus our present plant seems to agree, except in having a 3-(not 5-)celled fruit.

Fig. 1. Flower ; *magnified.* *f. 2.* Raceme of fruit ; *nat. size.*
f. 3. Calyx and pistil. *f. 4.* Transverse section of the ovary.
f. 5. Fruit. *f. 6.* Vertical section of ditto. *f. 7.* Seed (scarcely
mature) :—*magnified.*



TAB. DLIX.

ARTHROTAXIS CUPRESSOIDES. *Don.*

Ramis (cum foliis) teretibus, foliis late rhombeo-ovatis obtusis appressis obtuse carinatis quadrifariam imbricatis, squamis antheriferis ellipticis obtusis longe stipitatis.

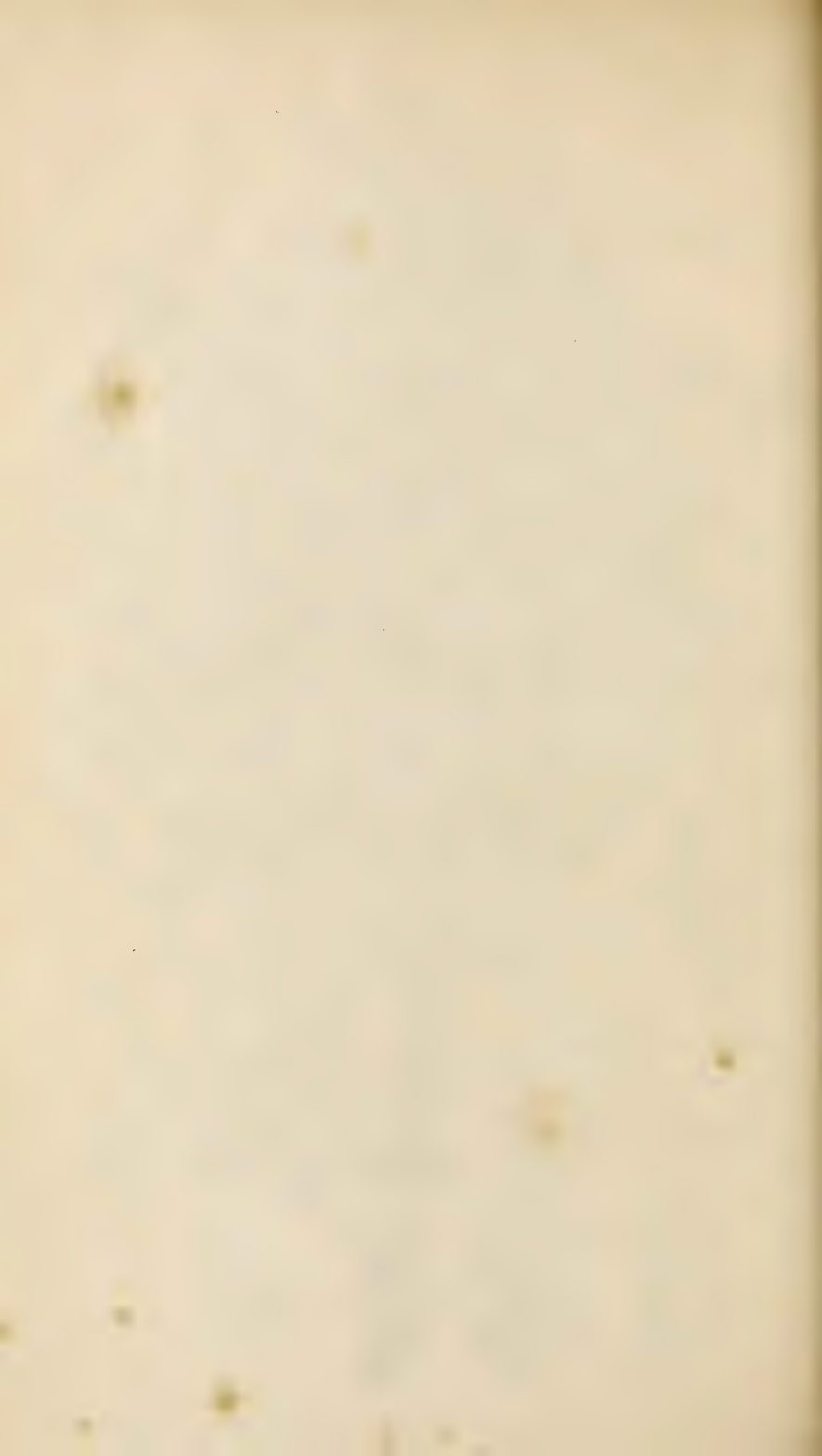
Arthrotaxis cupressoides. *Don, Trans. Linn. Soc. v. 18, p. 173. t. 13, f. 2. (excl. n. 369, of Mr. Gunn.)*

HAB. Launceston, Tasmania. *Mr. Gunn, (n. 365) 1833.*

One of the many fine and new plants which have been sent from Tasmania (as the inhabitants of Van Diemen's Land, correctly enough, wish their island to be called) by the excellent Ronald Gunn, Esq., and well described, and also figured, by the late Mr. Don. Our specimens, though not possessing perfect fruit, enable us to add a more perfect analysis than has yet appeared. Mr. Don's essential character of this genus will be given with our next plate.

Fig. 1. Leaf, seen from the underside. *f. 2.* Female amentum or strobilus. *f. 3.* Scale from the same, with its seeds. *f. 4.* Immature seed. *f. 5.* Male amentum. *f. 6.* The same, more advanced. *f. 7, 8.* Back and front view of the antheriferous scale :—more or less *magnified*.





TAB. DLX.

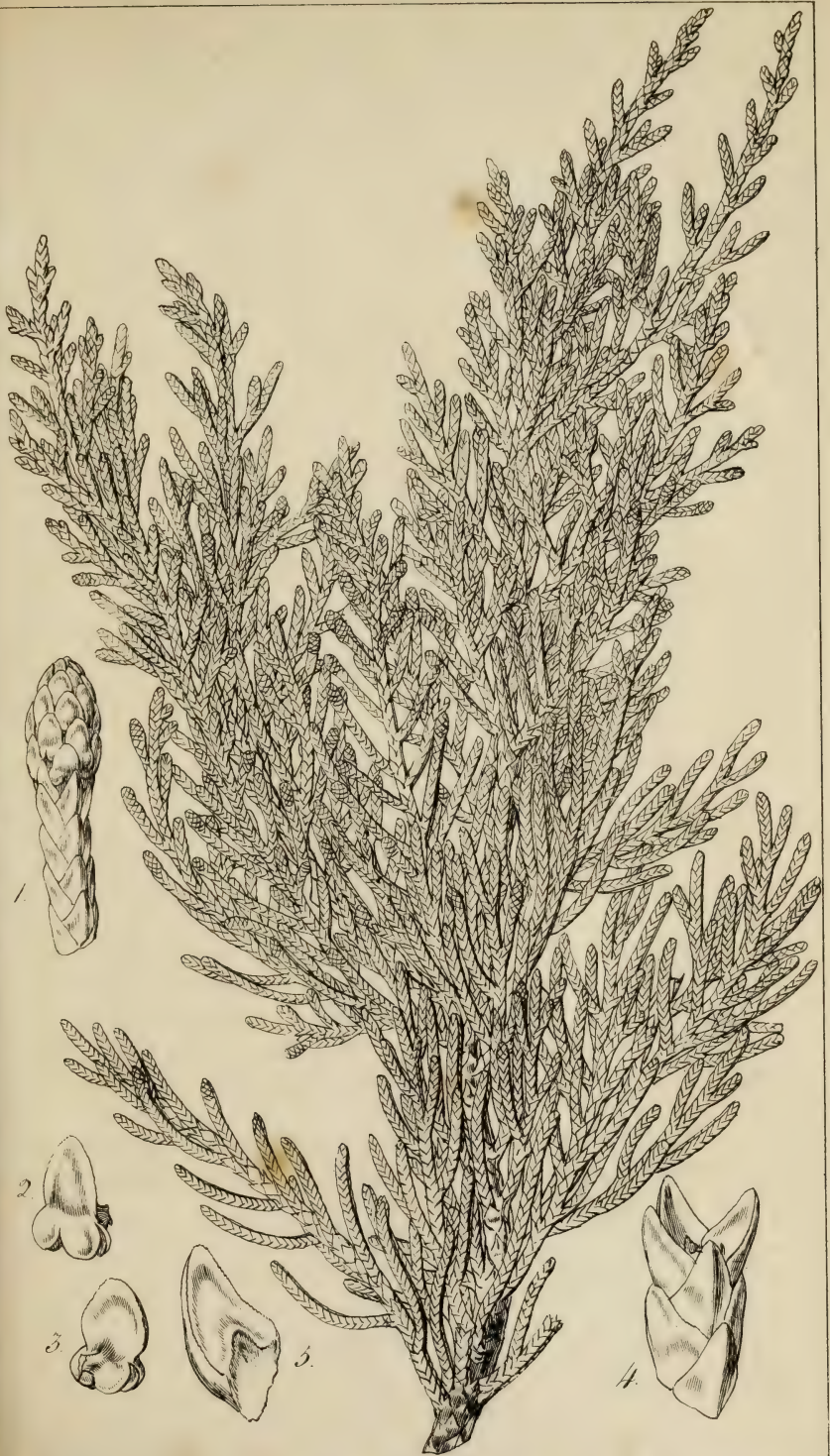
Microcady
 ARTHROTAXIS TETRAGONA. Hook.

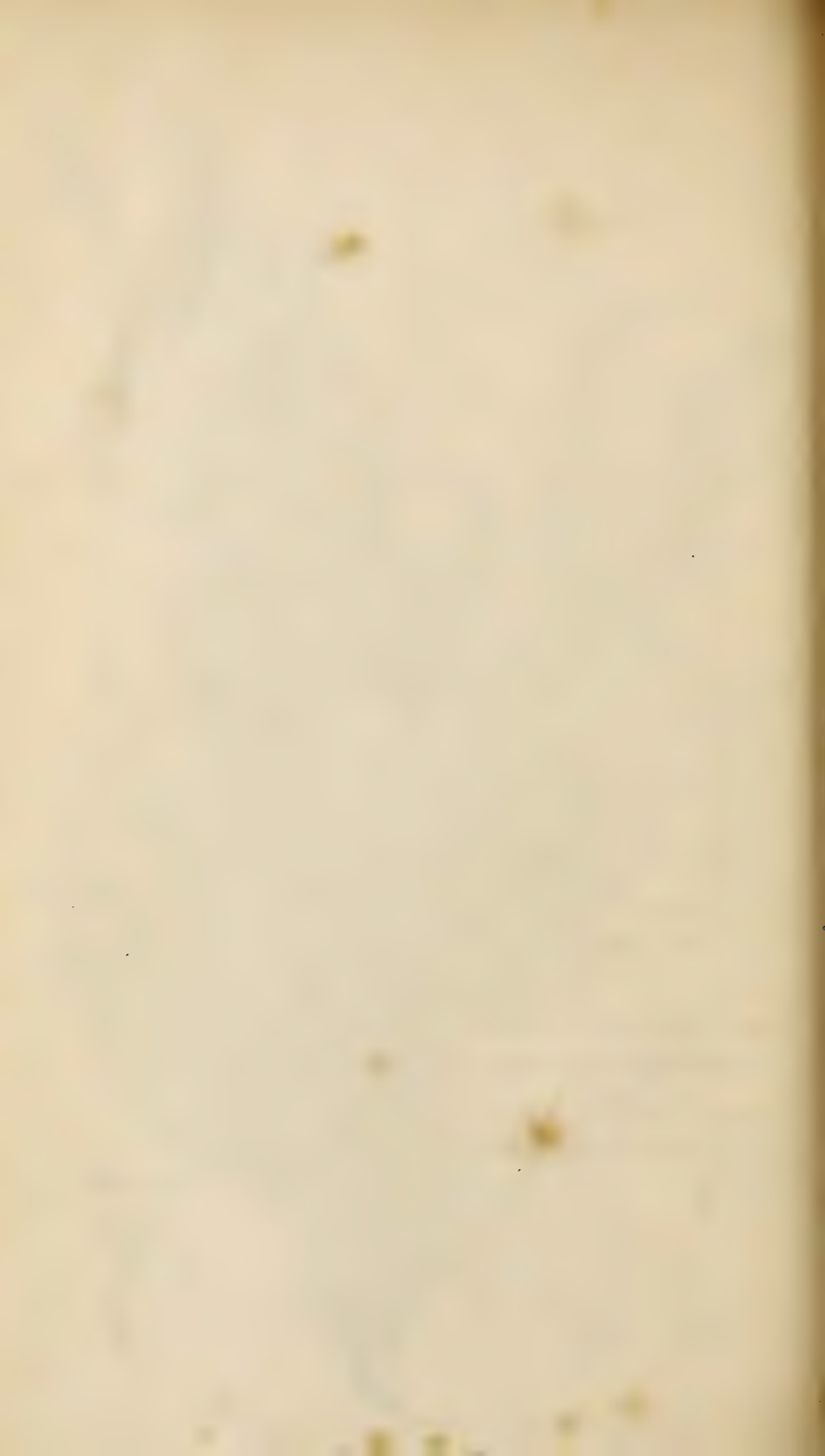
Ramis (cum foliis) tetragonis, foliis ovatis obtusis appressis acute carinatis quadrifariam imbricatis, squamis antheriferis ovatis brevi-stipitatis.

HAB. Tasmania. Mr. Gunn (n. 369) 1833.

The following is Mr. Don's *Character essentialis* of the present genus: "*Amenta mascula* solitaria, multiflora, capitata, laxa. *Squamæ antheriferæ* longe unguiculatæ, subfastigiatae. *Antherarum thecæ* 2, distantes, divaricato-patentes. *Semina* 2, v. 3, compressa, pendula, margine altero alato." Of the present plant, I have as yet only specimens with male amenta; but since they sufficiently accord with the original species of Mr. Don, and as it comes from the same country, I have ventured to consider it of the same genus. Specifically it is abundantly distinct, by its slenderer branches, and, taken in conjunction with the leaves, their 4-sided form.

Fig. 1. Male amentum. f. 2, 3. Upper and under view of an anther-scale. f. 4. Portion of a branch, with leaves. f. 5. Inner view of a leaf:—*magnified*.





TAB. DLXI.

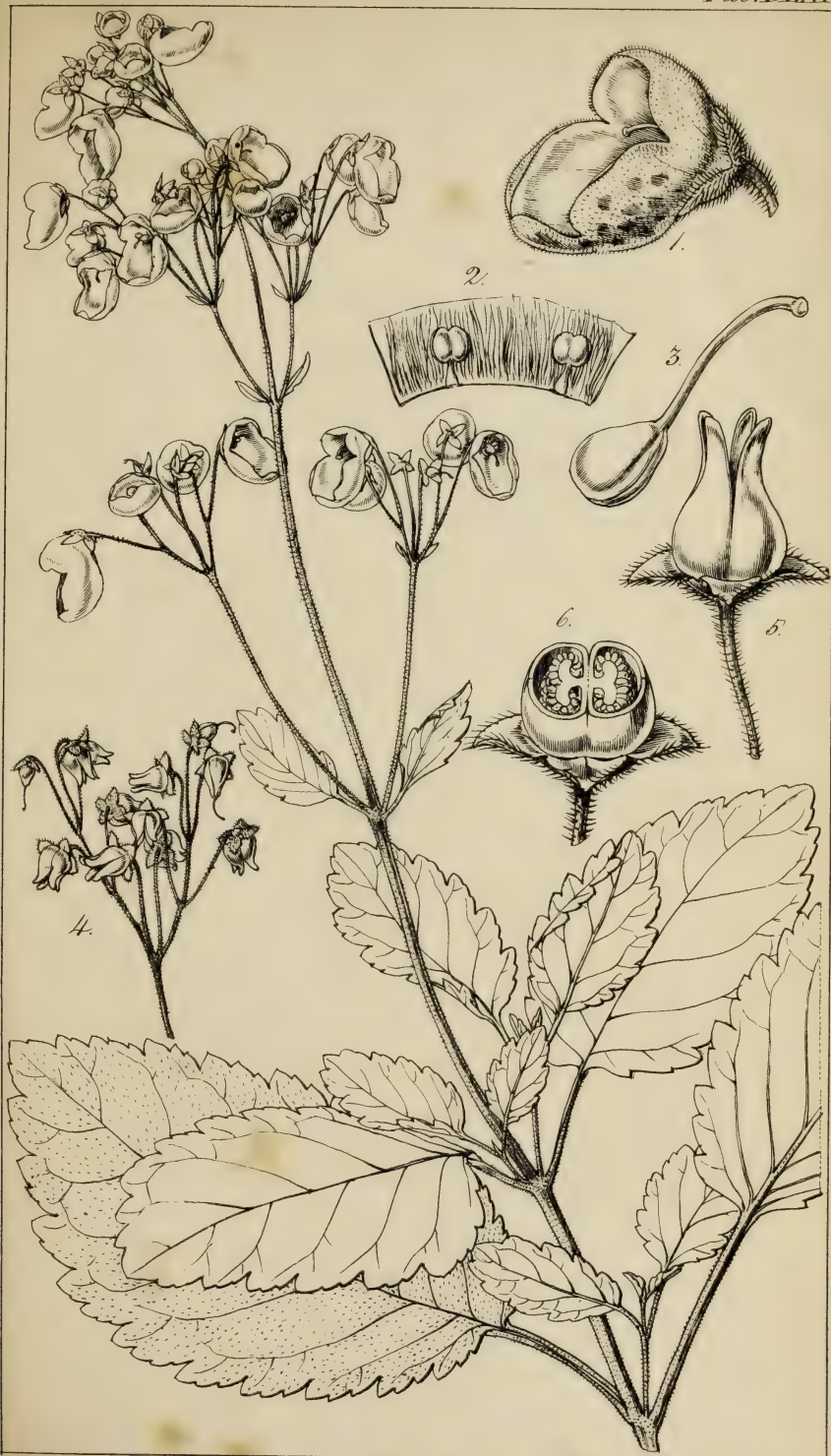
CALCEOLARIA SINCLAIRII. Hook.

Caule erecto pubescente, foliis elliptico-ovatis grosse duplicato-serratis scabris petiolatis, paniculis terminalibus, corollæ pubescentis maculatæ labiis concavis superiore (minore) integro inferiore obtuse trilobo intus basi hirsutis.

HAB. Waihaki, Northern Island of New Zealand. Dr. Sinclair, R. N. 1842.

Remote as is the situation of New Zealand from South America, there are some remarkable features which indicate an affinity in its vegetation with that of the latter country. This is shown by the existence of *Drimys* and *Fuchsia*, genera otherwise peculiar to the great South American continent. And now, thanks to our friend Dr. Sinclair, a species of *Calceolaria* has been detected, of which I here give the figure. It is a tall growing plant, found in bushy places in considerable plenty about Waihaki. The corolla has both its lips concave, and so far expanded as to approach that of *Jovellana*. It may indeed be considered a connecting link between the two genera.

Fig. 1. Flower. f. 2. Inner base of the corolla, with stamens. f. 3. Pistil. f. 4. Capsules; nat. size. f. 5. Single capsule. f. 6. The same, cut through transversely:—all but figure 4, more or less magnified.





TAB. DLXII.

QUERCUS LUSITANICA. Lam.

(Gall-nut Oak).

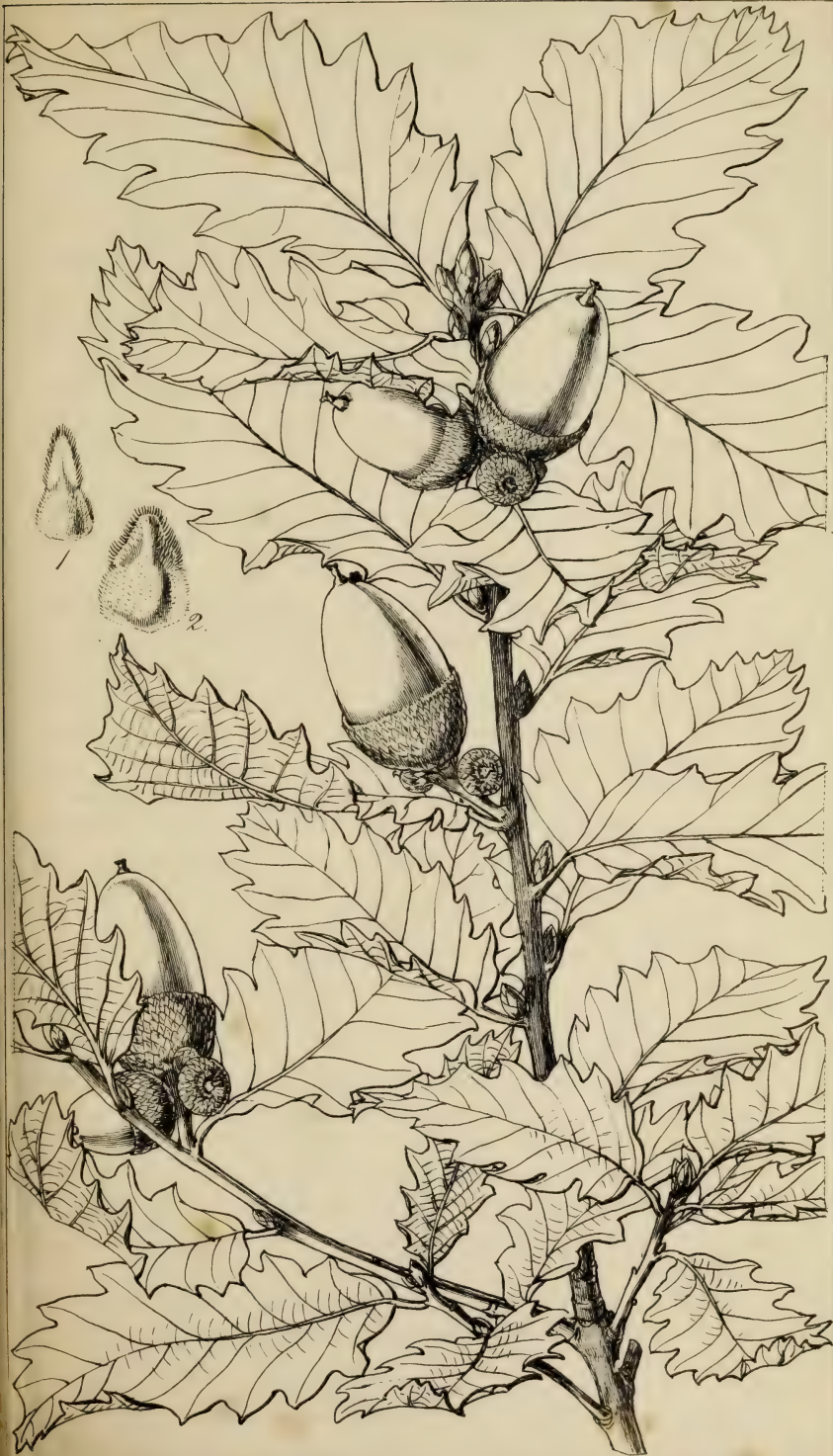
Foliis ovatis aut ovato-lanceolatis coriaceis luridis subtus pallidis junioribus tomentosis margine undulato-serratis dentibus acutis aut crenatis basi rotundatis aut cordatis, cupulæ subsessilis squamis adpressis lanatis subciliatis, glande conica aut cylindraceo-elongata. Webb.

Q. Lusitanica, Lam.—Webb, *It. Hisp.* p. 11. Q. faginea, Lam.—Q. Valentina, Cav. *Ic.* 2. p. 25, t. 129. Q. australis, Link. Q. hybrida, Brot. Q. infectoria, Olivier. Q. Turneri and Q. Canariensis, Willd.

HAB. From N. lat. 41° and 42° in Spain and Portugal, to the Valley of Domoûz Derèh, N. of Constantinople in the East, and as far South as Syria. Webb.

Few plants require illustration by figures more than the Oaks of the south of Europe. Mr. Webb's "*Iter Hispaniense*" contains most valuable remarks on those of Spain and Portugal; and it is through them I am able to determine the present species, of which the specimen was kindly sent to me by G. H. Ward, Esq., of Northwood Park, Isle of Wight, taken from a fine young tree which that gentleman raised from acorns of the south of Spain. It entirely accords with the *Q. Lusitanica* of Lamarck, of which Mr. Webb says: "It has been the fate of this remarkable tree to have been overlooked for more than two hundred years after the time of Clusius, and then to have been almost simultaneously re-discovered and described under a multitude of names (as given above) by various authors. This, too, is the more singular as regarding a tree which produces an object of primary importance, namely, the *gall-nuts* of commerce. Clusius, indeed, remarks: "*Galli autem extremis ramulis nascuntur, iis quæ in officinis venales reperiuntur, perquam similes;*" and in fact, when compared with the *Quercus infectoria*, both as originally collected by Olivier, and as found by Labillardière in Syria, and by myself and M. Parolini in Phrygia, the Spanish turns out to be identical with the Levant species, whose product is so universally employed."

Fig. 1. Upper scale from the base of the acorn-cup. f. 2. Scale from the base of the cup:—*magnified.*





TAB. DLXIII.

SANTALUM MIDA, β . Hook.

Foliis alternis lanceolatis subsessilibus, racemis axillaribus terminalibusque folio multoties brevioribus, floribus pentameris (nunc tetrameris) squamis cum staminibus alternantibus parvis, iis stam. oppositis majusculis longe piloso-fimbriatis.

a. foliis angusto-lanceolatis. Mida salicifolia. *A. Cunn. Fl. N. Zeal. in Ann. of Nat. Hist. v. 1, p. 376.*—(Vid. TAB. NOSTR. DLXXV.)

β . foliis lanceolatis. Mida eucalyptoides. *A. Cunn. l. c. p. 376.*—TAB. NOSTR. DLXIII.

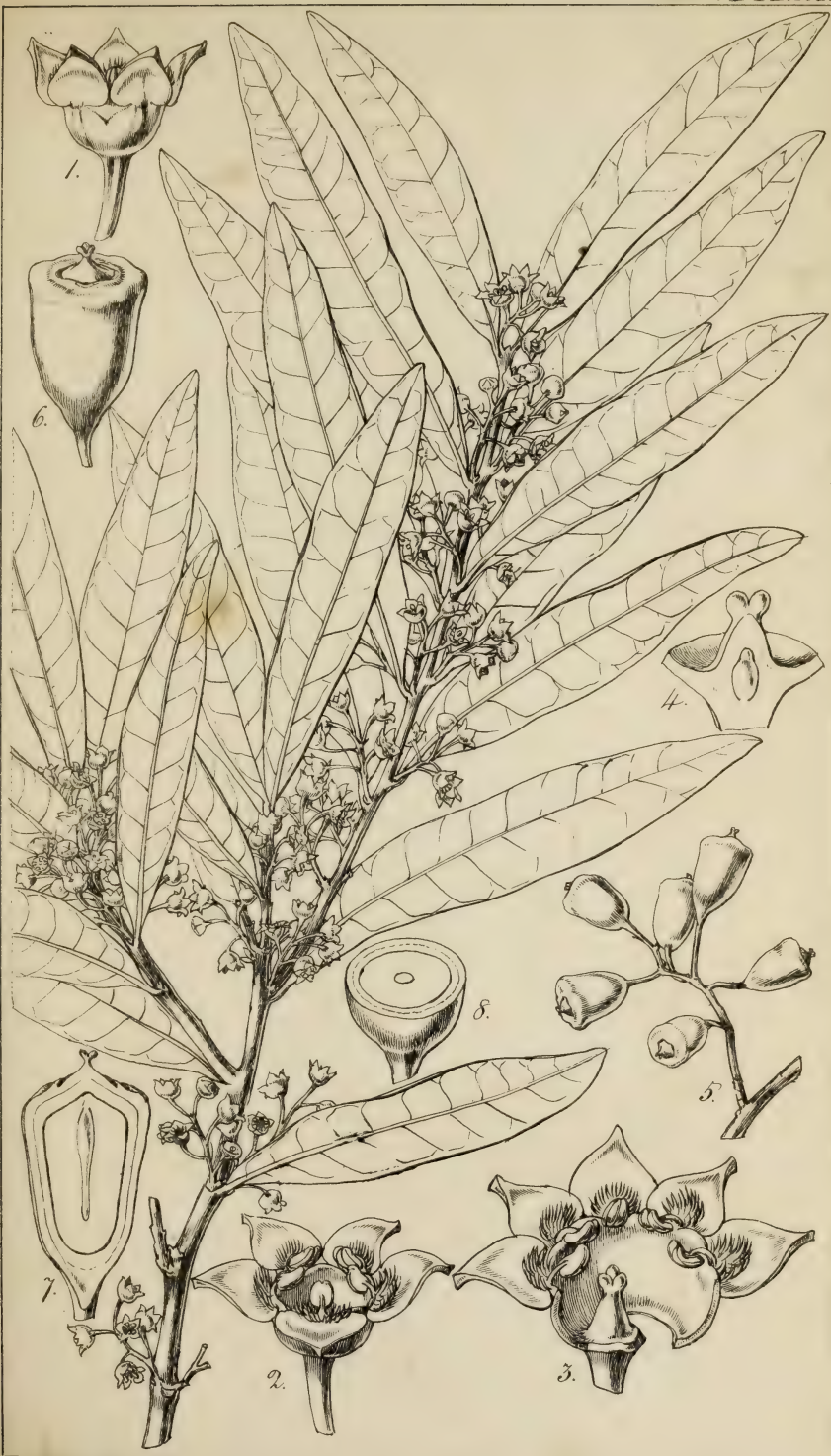
γ . foliis lato-lanceolatis ovalibusve. *M. myrtifolia. A. Cunn. l. c. p. 377.*

HAB. Northern Island of New Zealand, especially about the Bay of Islands. *A. and R. Cunningham. Mr. Colenso (n. 31) in dense woods. Edgerley.*

Upon this plant, and others which appear to me to be slight varieties, merely differing in the greater or lesser breadth of the leaves, and called "*Mida*" by the natives, Mr. A. Cunningham has founded his genus "*MIDA* (*Thesium*,* *Linn.*)" About the same time that Mr. Cunningham published his character in the Annals of Nat. Hist., Endlicher described it from specimens received from the author, in his "*Genera Plantarum.*" The descriptions differ slightly from each other, and both from what I have myself observed, and which has led me, without any hesitation, to refer it to *Santalum*, with which it seems to agree in habit and in every essential point. Mr. Cunningham says, "*Discus epigynus nullus; Stam. 5, extus fasciculo gracili villorum munita.*" But I find 5 small, broad, rounded scales at the mouth of the perianth, which may, I think, be considered the lobed margin of an hypogynous disk, with which the whole tube of the perianth is lined; and the "*fascicle of hairs*" arises from a distinct scale inserted at the back of the anther, exactly as in *Santalum*. (See *S. album* in *Nouv. Dict. des Sc. Nat. cum Ic. et S. Freycinetianum*, Gaud. et Freyc. *Voy. t. 45.*) Endlicher observed 4 stamens and 4 lobes to the calyx, which latter he correctly describes as deciduous. He speaks of 2 series of glands, but calls those between the stamens the exterior, which appear to me interior.

Fig. 1, 2. Flowers. *f. 3.* The same laid open. *f. 4.* Ovary laid open. *f. 5.* Mature fruits (*nat. size.*) *f. 6.* Single fruit. *f. 7.* The same, cut through vertically. *f. 8.* The same, cut through transversely. All but figure 5 more or less *magnified*.

* I do not know from this whether Mr. Cunningham considers that the plant has been called *Thesium* by Linnæus, of which there is no evidence that I am aware of, or that any species of the Linnæan *Thesium* are to be referred to it.





TAB. DLXIV.

CARPODETUS SERRATUS. *Forst.*

Carpodetus serratus. *Forst. Gen. t. 17. De Cand. Prodr. 2, p. 29. A. Cunn. Fl. N. Zeal. in Ann. Nat. Hist. v. 3, p. 247.*

HAB. N. Zealand. Middle Island. *Forster*. On the alluvial banks of rivers, occasionally in salt-water marshes, Wangarei, &c. ; Northern Island :—called “*Piri-piri-water*” by the natives. *A. Cunningham. Mr. Colenso (n. 33).*

Arbor 10-20-pedalis, (*A. Cunn.*) *Folia* biuncialia, alterna, ovata, coriaceo-membranacea, opaca, subglanduloso-dentata, acuta, supra puberula, subtus pallidiora, basi in petiolum semilineam longum attenuata. *Flores* corymbosi, corymbis pedunculatis folio brevioribus; ramis pedicellisque minutè bracteolatis. *Calyx* parvus, semisuperus, pubescens: tubo brevissimo pateriformi, limbo 5-dentato, dentibus erectis, deciduis. *Corolla* 5-petala, ovato-lanceolata, extus pubescens, patens. *Stamina* cum petalis alternantia. *Filamenta* erecta, petalis breviora. *Antheræ* ovato-rotundatæ, biloculares. *Ovarium* turbinatum, a vertice depressum, plusquam semiinferum, 5-loculare, pluri-ovulatum, ovulis podospermo elongato, e loculi summitate, angulo interiore pendentibus. *Stylus* filiformis, longitudine filamentorum. *Stigma* capitatum. *Capsula* (vix matura) subglobosa, supra medium e lapsu loborum calycinorum quasi zonata. *Loculi* et *semina* immatura ut in ovario.

De Candolle referred this plant to *Rhamneæ*; but the stamens are certainly alternate with the petals, and if *Celastrineæ* be allowed to have a nearly inferior ovary and seeds suspended from the upper and inner angle of the cells, it may be safely placed in that Order. Mr. Colenso observes, that the flowers are white, and the leaves generally variegated and clouded with yellow, which disappears in the dried specimens.

Fig. 1, 2. Flowers. f. 3. Section of the ovary. f. 4. Nearly mature capsules; nat. size. f. 5. Single capsule. f. 6. The same, cut through vertically. f. 7. The same, cut through transversely. f. 8. Scarcely mature seed, with its podosperm:—all but figure 4 more or less magnified.





TABS. DLXV.—DLXVI.

HOHERIA POPULNEA. *A. Cunn.*

Hoheria populnea. *A. Cunn. Fl. Nov. Zeal. in Ann. Nat. Hist.*
v. 3, p. 319.

Sida Hoheri. *Hook. mst.*

HAB. New Zealand, Northern Island. Banks of rivers and skirts of forests, Bay of Islands. *Fraser*, 1825. *R. Cunningham*, 1833. *Mr. Colenso. Edgerley.* "*Hoheri*" of the natives.

My first knowledge of this fine and large growing shrub was from specimens sent to me by Mr. Fraser in the year above-mentioned; and these I had no hesitation in referring to *Sida*, in *Malvaceæ*. The accurate Mr. Allan Cunningham, however, was of a different opinion, and has constituted of it a new genus, *Hoheria*, which he places in *Bombaceæ*, rather than *Malvaceæ*, but with some degree of doubt. It is true I am not more fortunate than Mr. Cunningham in possessing the mature fruit; but so far as can be judged from the ovary and ovules, there is nothing to militate against its being a *Sida*. Its habit, indeed, is peculiar, and the deeply serrated, and almost spinulose leaves, are remarkable. It may form a section of *Sida*, to which the name *Hoheria* may be given. In the meantime, I retain the name *Hoheria*, and give the figure as illustrative of the plant.

Fig. 1. Unexpanded flower. *f. 2.* Expanded flower. *f. 3.* Section of the calyx, including the pistil. *f. 4.* Free portion of the staminiferous column. *f. 5.* Vertical section of the ovary. *f. 6.* Transverse section of ditto:—*magnified.*



TAB. DLXVII.

MAZUS PUMILIO. *Br.* (?)

Corollæ labio superiore profunde bifido, scapis 1-4-floris calycibusque glabris. *Br.*

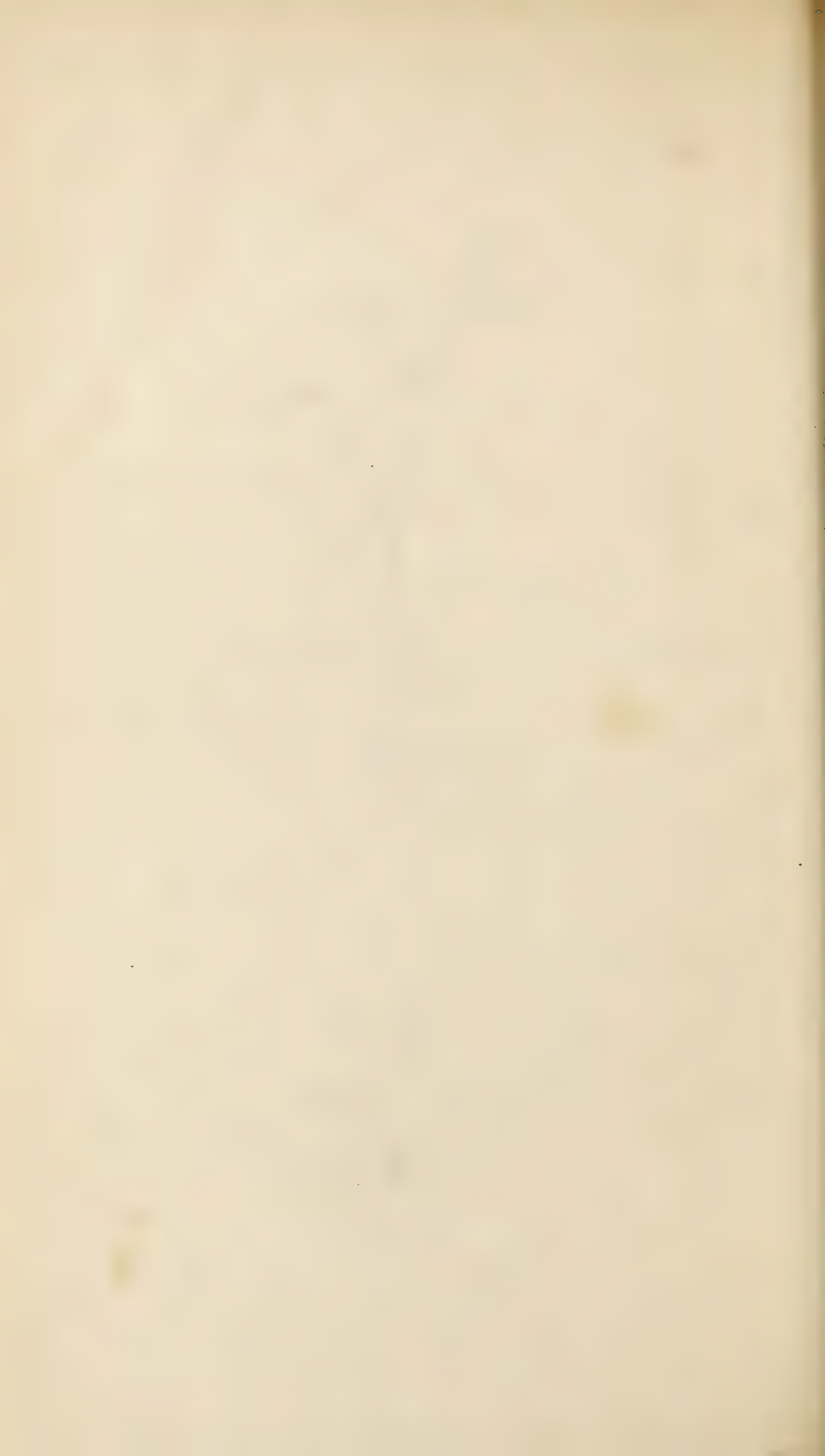
Mazus pumilio. Br. Prodr. Fl. Nov. Holl. p. 439. Endl. Iconogr. Gen. Pl. t. 102.

Ourisia sp. *Hook. supra, TAB. DXLV.-DXLVI. (note.)*

HAB. Tasmania. *R. Brown, Esq.* At the foot of dry, clayey cliffs, near Matapouri, on the east coast of the northern island of N. Zealand, Dec. 1837, and again in March, 1841. *Mr. Colenso (n. 71).*

This pretty little plant did not escape the notice of Mr. Colenso, who found it in no other localities save those above-mentioned, and recognised it as something quite new to New Zealand. I had no means, from the paucity of specimens, of examining minutely into the structure of the flower, without destruction to the specimens, and, in the note above referred to, I too hastily pronounced it to be an *Ourisia*. Mr. Bentham, however, whose judgment in this matter stands deservedly high, at once recognised it as most likely belonging to the genus *Mazus*: and upon comparing it with Mr. Brown's description of his *Mazus pumilio* of Van Diemen's Land, I am inclined to believe it to be the same species. He makes two varieties:—"a. racemus 3-4-florus, pedunculis juxta apicem bracteola setacea.—β. scapus uniflorus." One of our specimens is still more luxuriant than the var. a.





TAB. DLXVIII.

PHEBALIUM NUDUM. Hook.

Ramis erectis virgatis, foliis subsessilibus oblongis obtusis glabris nudis subserratis supra præcipue glanduloso-punctatis, corymbis terminalibus multifloris, calyce minuto 5-dentato, petalis lanceolatis, staminibus glabris petala duplo fere superantibus, ovario glabro.

HAB. New Zealand; Owae, on the east coast of the northern island. Mr. Colenso, 1838 (*n.* 56). Hokianga. Edgerley.

I have here again the pleasure of figuring another genus, recently added to the Flora of New Zealand; first detected by Mr. Colenso, and soon after by Mr. Edgerley. Most of the species of *Phebalium* are remarkable for the dense tomentum with which almost the whole plant is covered, or more frequently a silvery scurf. Our *P. montanum*,* and some others in our Herbarium, from New Holland and Van Diemen's Land, are an exception and they have terete leaves. The present, however, possesses the broad foliage, and quite the habit of our *P. retusum* (*supra*, vol. 1, t. 57) and the leaves quite free from any adventitious covering, and in other respects is also very different from any known species of the genus. It forms a tall, very graceful shrub, or small tree, as Mr. Colenso describes it, 12-16 feet high, known to the natives by the name of "*Mairehau*." Specimens were forwarded by Mr. Colenso to Mr. Allan Cunningham, soon after they were gathered; but he did not live to examine them, and to share in the pleasure such a discovery could not fail to have afforded him.

Fig. 1. Portion of a leaf. *f.* 2. Flower. *f.* 3. The same, with the corolla more expanded. *f.* 4. Pistil. *f.* 5. Section of the ovary:—*magnified*.

* *Icones Plant.* v. 1, t. 59.





TAB. DLXIX.

METROSIDEROS DIFFUSA. *Sm.*

Ramulis radicanibus, foliis elliptico-ovatis coriaceis glabris acuminatis venosis supra nitidis subtus nigro-punctulatis, paniculis axillaribus terminalibusque foliis longioribus, ramulis oppositis pedicellisque pilosis, calycibus floriferis turbinatis, tubo semisupero fructifero urceolato, limbo 5-lobo persistente.

Metrosideros diffusa. *Sm. in Linn. Trans. v. 3, p. 268. De Cand. Prodr. 3, p. 224.*

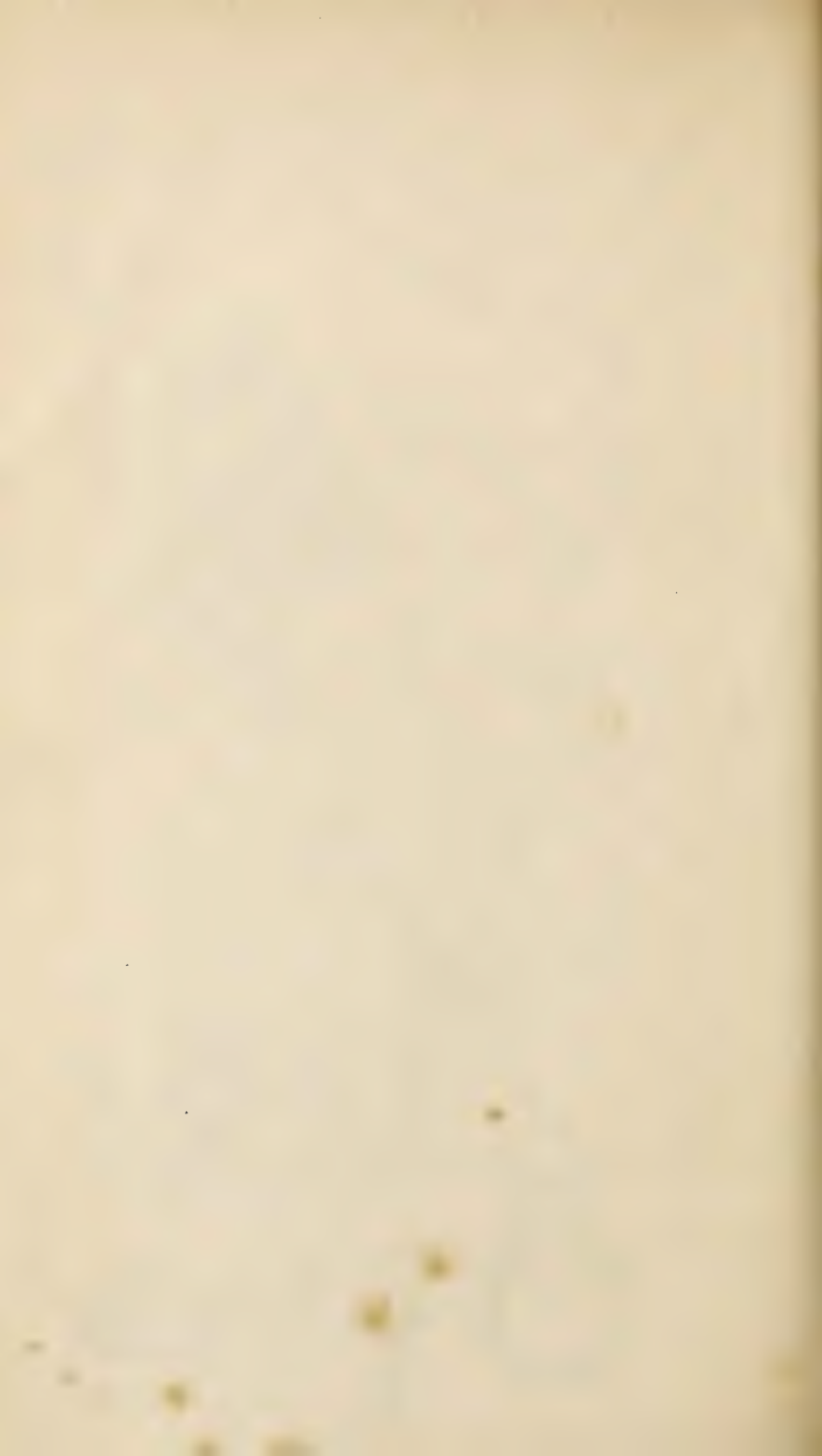
Melaleuca lurida. *Linn. fil. Suppl. p. 3422. (non Forst.)*

HAB. New Zealand. Northern Island. *Sir Joseph Banks, 1769.* Dense forests at Wangaroa, adhering to the trunks of the largest timber-trees. *A. Cunningham. Hokianga. Edgerley.*

At the time the accompanying figure was made, I did not possess a flowering specimen, which has been since kindly given to me by Mr. Heward, the possessor of Mr. Allan Cunningham's valuable authenticated collections. In the flowering state, the calyx is turbinate, the lower half of the tube incorporated with the germen and the narrowest, the upper, free portion, is dilated and campanulate; the limb of 5 small, rounded lobes: the petals yellowish, thrice as long as the calycine lobes, very concave, and unguiculate: the stamens yellow, four times as long as the petals, and a little longer than the style. In the state of the fruit, the calyx becomes much altered in shape; it is urceolate, the lower portion incorporated with the capsule, much enlarged, globose, 3-lobed, surmounted by the narrow, tubular neck, and the 5 persistent spreading lobes. The capsule is 3-celled, and, together with the calyx, splits into three deep valves, bearing the dissepiments in the centre of the valves. At the base of the inner angle of each cell, is a rounded receptacle, covered with erect clavate seeds, which fill the cavities of the cells.

Fig. 1. Mature fruit, entire. *f. 2.* The same, beginning to burst. *f. 3.* The same, burst quite open, many of the seeds removed. *f. 4.* Section of the capsule; the seeds removed. *f. 5.* Immature seed:—*magnified.*





TAB. DLXX.

ALECTRYON EXCELSUM. DC.

GEN. CHAR. *Cal.* 5-lobus, æstivatione imbricata. *Pet.* 0. *Stam.* 7-8, hypogyna, æqualia, erecta. *Antheræ* biloculares, filamentorum longitudine. *Ovarium* ovato-obliquum, 1-(3 *A. C.*)-loculare, dorso crista erecta alatum, et hinc stylus subalatus lateraliter evadit. *Stigma* simplex (3-fidum *A. C.*) “*Bacca* sicca ab ortu 1-locularis margine aut apice alata. *Semen* exalbuminosum, arillo incompleto cinctum, basi loculi affixum, erectum. *Cotyledones* spiraliter convolutæ, et radícula deorsum spectans.” (*A. C.*)

Alectryon excelsum. *Gærtn. Fruct. v. 1, p. 216, t. 46. De Cand. Prodr. v. 1, p. 616. All. Cunn. Fl. Nov. Zel. in Tayl. Ann. Nat. Hist. v. 3, p. 318.*

Euonymoides excelsa. *Sol. mst. in Herb. Banks.*

HAB. N. Zealand, Northern Island. *Sir Joseph Banks, 1769.* Banks of rivers and harbours, frequently within range of the tide. Wangaroa, &c. *A. and R. Cunningham.* Bay of Islands. *Dr. Dieffenbach. Mr. Colenso. “Tetohi”* of the natives.

Folia alterne pinnata cum impari, foliolis petiolulatis oblongo-ovatis, acuminatis, integerrimis, subtus pubescentibus. *Paniculæ* axillares terminalesque. *Flores* parvi. *Stamina* intense rubra.

The ripe fruit of this rare and little known genus I have not seen; but to judge from a drawing made on the spot, and given me by Dr. Dieffenbach, its shape is very similar to the more advanced ovaries, represented at our figure 3: this capsule bursts on one side, and a black, round, shining seed is protruded, enveloped in a very large scarlet fleshy arillus, whence, in conjunction with the crested fruit, arises the generic name ἀλεκτρον, a cock.

Fig. 1, 2. Flowers. f. 3. Branch of the panicle, with immature fruits. f. 4. Single fruit from ditto. f. 5. The same laid open. f. 6. Section of an immature seed:—magnified.





Dieffenbachianæ.

N. O. Ranunculaceæ.

TABS. DLXXI, DLXXII.

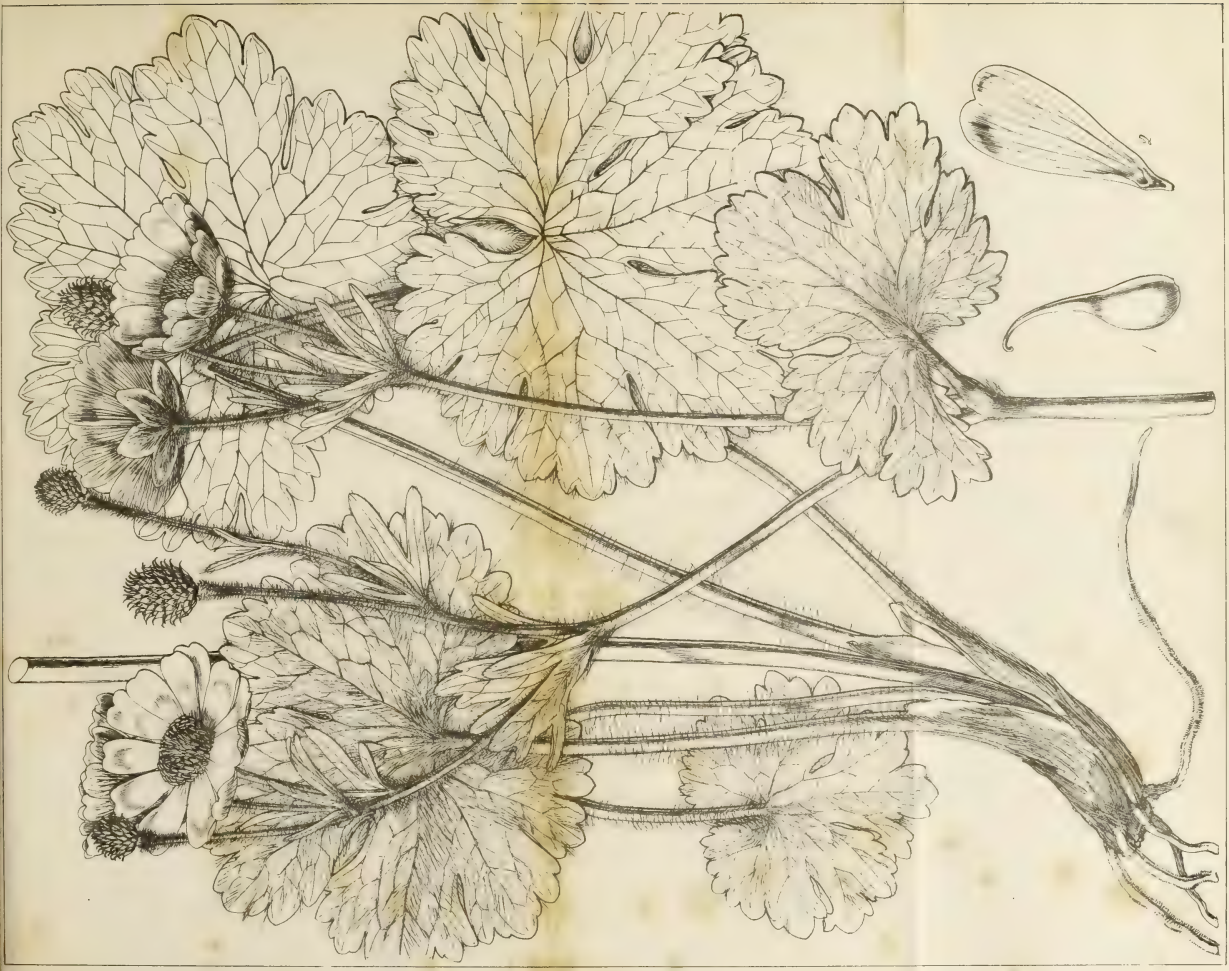
RANUNCULUS NIVICOLA. *Hook.*

Caulescens, pilis longis hirsutus, foliis radicalibus longissime petiolatis reniformi-cordatis profunde 3-5-lobis, lobis lato-cuneatis inciso-crenatis, caulinis perpaucis breviter petiolatis, summis sessilibus linearibus v. 3-multifidis laciniis angustis, panicula terminali, sepalis 5 lato-lanceolatis appressis, petalis 12-15 cuneatis lineatis retusis, fructus capitulis ovato-globosis, stylis ovarium subæquantibus subulatis apice uncinatis.

HAB. On Mount Egmont, in the Northern Island of New Zealand, at the limit of perpetual snow. *Dr. Dieffenbach.*

This is one of the noblest of all the species of *Ranunculus* yet known to us, 2 or 3 feet high, with leaves 4 and 5 inches in diameter, and flowers that a half-crown piece will scarcely cover. In habit, it a good deal resembles the fine *R. cortusæ-folius* of Teneriffe, and *R. Creticus* of Crete and Northern Africa; but the flowers and fruit are totally different, and the numerous petals exhibit an affinity with several South American species. The locality is no less interesting than the plant itself, being the limits of perpetual snow, on Mount Egmont, which limit Dr. Dieffenbach estimates at 7204 feet above the level of the sea, and the whole height of the mountain at 8839 feet.

Fig. 1. Immature carpel :—*magnified.*







TAB. DLXXIII.

ARTHROTAXIS LAXIFOLIA. Hook.

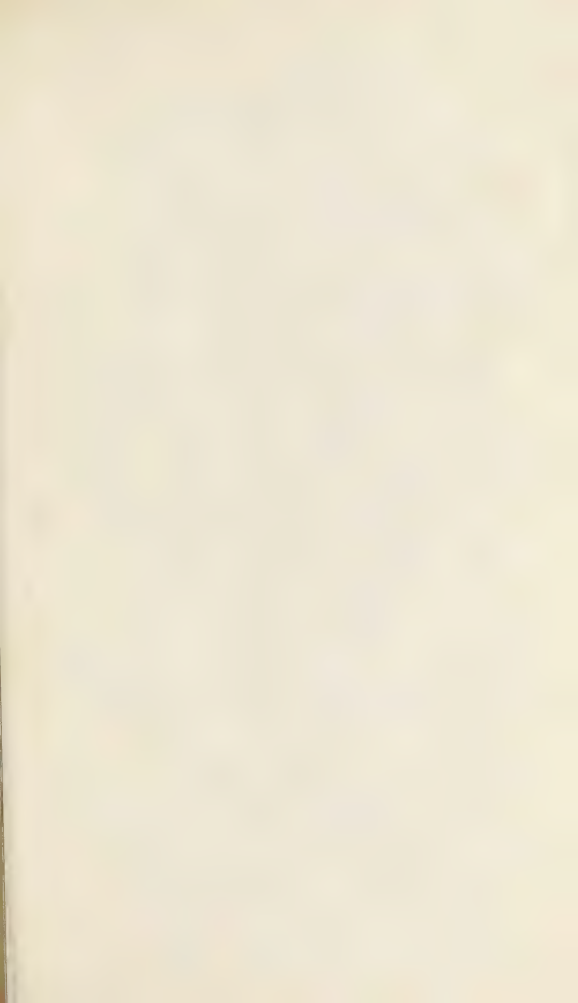
Ramis (cum foliis) subteretibus, foliis subquadrifariis laxis erecto-incurvatis ovato-lanceolatis acutis dorso convexis carinatis intus concavis.

HAB. Tasmania, *Ronald Gunn, Esq.* 1833 (*n.* 369.)

Of both the kinds of fructification of this plant, I am ignorant: indeed, I possess only the solitary specimen here represented, and which appears to hold an intermediate rank between the *A. cupressoides*, *Don*, (TAB. NOSTR. DLIX.) and the following species, *A. selaginoides*. To the former Mr. Don refers it; that is, if the specimen, *n.* 369, which he examined in Dr. Lindley's Herbarium, from Mr. Gunn, be the same as mine, which I have reason to suppose it is: but to me they appear quite different species. It behoves a botanist, however, to speak with caution when treating of a family of plants whose leaves are peculiarly liable to variation in the different stages of their growth.

Fig. 1. Portion of a branch, with leaves. *f.* 2. Inner face of a leaf. *f.* 3. Outer face of a leaf:—*magnified*.





TAB. DLXXIV.

ARTHROTAXIS SELAGINOIDES. Don.

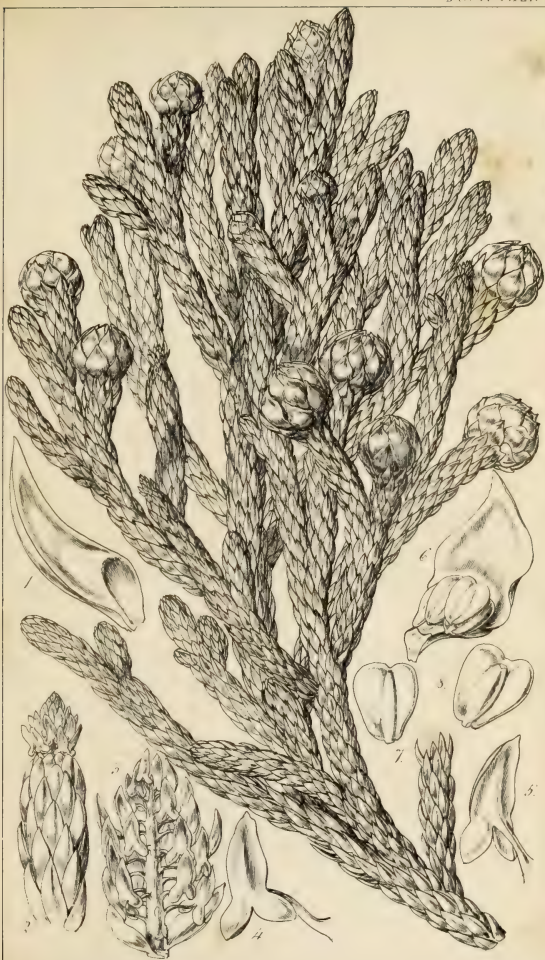
Ramis (cum foliis) teretibus crassis, foliis undique imbricatis laxiusculis erectis incurvatis lanceolatis acuminatis dorso carinatis intus canaliculatis, squamis antheriferis acutis longe stipitatis.

Arthrotaxis selaginoides. Don, *Linn. Trans.* v. 18. p. 172.

HAB. Mountains of Tasmania, near Launceston. Ronald Gunn, *Esq.* 1833. (n. 368.)

I regret that my notes on the *Coniferæ* of Tasmania, sent me by Mr. Gunn, if they ever reached my hands, have been mislaid, so that I am quite unable to give any of the remarks of that gentleman, which are frequently both full and valuable as accompanying his highly prized specimens. I cannot even state the size of the trees, nor their exact locality. The present species of *Arthrotaxis*, as will be at once seen, comes near the *A. cupressoides* (TAB. DLIX.), and is from the same country. It differs in the much stouter stems and branches, the differently shaped leaves, their dissimilar arrangement, the larger cones, and the acutely pointed anther-scales.

Fig. 1. Leaf, seen from the under side. *f.* 2. Male amenum. *f.* 3. The same, with several of the anther-scales removed. *f.* 4. 5. Anther-scales. *f.* 6. Inner view of a scale from the nearly ripened cone. *f.* 7. 8. Seeds :—*magnified.*





TAB. DLXXV.

SANTALUM MIDA. Hook.

(See the description at TAB. DLXIII.)

The accompanying figure of the *Mida salicifolia*, of A. Cunningham, was prepared under an impression that it was one of three species of *Mida* as described by that author. A subsequent examination, however, brought me to a different conclusion, and led me to consider the three supposed species of *Mida* to be in reality varieties of one kind of *Santalum*, as detailed in the above description. It will be here seen that the stigmas vary from 3 to 4, and that the pedicels are more thickened than those given in our TAB. DLXIII. This latter circumstance, however, I take to be no specific difference, but rather a sexual state, and indeed, the flowers of the present specimen appear to be abortive.

Fig. 1. Flower. *f.* 2. Flower, more expanded and laid open. *f.* 3. Abortive (?) ovary and calyx-tube, the lobes of the calyx being removed. *f.* 4. The same cut through vertically:—*magnified.*





TAB. DLXXVI.

DRIMYS AXILLARIS. *Forst.*

Foliis oblongo-obovatis supra viridibus subtus glaucis, pedunculis axillaribus fasciculatis unifloris petiolo paululum longioribus, floribus parvis, petalis 6 biserialibus 3 int. minoribus.

Drimys axillaris. Forst. Gen. t. 42. De Cand. Prodr. 1, p. 78. Rich. Fl. Nov. Zel. p. 290. A. Cunn. in Ann. Nat. Hist. 4, p. 257. Wintera axillaris. Forst. Prodr. n. 229. Willd. Sp. Pl. 2, p. 1240.

HAB. New Zealand, Northern Island. *Sir Jos. Banks, 1769.* Damp shady forests on the Kaua-Kaua and Hokianga rivers. *A. and R. Cunningham, Mr. Colenso.*

“Arbor 30-pedalis, superne foliosa, trunco 5 unc. diametro, declinato, flexuoso.” (*Colenso.*) Rami ramulique atro-purpurei, glabri. Folia alterna, petiolata, 3-4 uncias longa, unciam sesqui-unciam lata, elliptica, vel obovato-elliptica, integerrima, coriaceo-membranacea, penninervia, minute reticulata, glabra, supra viridia subtus glauca. Petiolus 3-4 lineas longus. Pedunculi simplices, uniflori, axillares, fasciculati, pedunculo parum longiores, ebracteati. Flores parvi. Calyx primum integer, demum in 2, plerumque 3, lobos rotundatos irregulariter dehiscens. Petala sex, patentia, quorum 3 exteriora majora, obovata, extus puberula: int. minora oblonga. Stamina 10-12, erecta. Filamenta brevia, superne incrassata. Antheræ e loculis duobus parallelis adnatis, vertice dehiscentibus. Ovaria 3-4, obovata, apice depressa; stigma sessile.

St. Hilaire, in his “Plantes usuelles du Brésil,” has shown that there is no sectional difference between *D. axillaris* and the South American species as suggested by De Candolle, the general structure of the calyx being the same in both. The flowers, however, of our plant are remarkable for their small size, and the small number of petals.

Fig. 1. Flower, scarcely expanded. *f.* 2. 3. Upper and under view of an expanded flower. *f.* 4. 5. Stamens. *f.* 6. Ovaries: —magnified.





TAB. DLXXVII, DLXXVIII.

IXERBA BREXIOIDES. *A. Cunn.*

GEN CHAR. Cal. inferus, coriaceus, 5-phyllus, æstivatione imbricata, decidua. *Petala* 5, membranacea, hypogyna, unguiculata sub disco hypogyno, decidua, æstivatione imbricata. *Stamina* hypogyna, cum petalis alterna, eodem loco inserta. *Filamenta* subulata. *Antheræ* ovato-acuminatæ, versatiles, biloculares, loculis basi divaricatis, introrsum longitudinaliter dehiscentibus. *Discus* hypogynus, 5-lobus, planiusculus, cum ovarii basi connatus, lobis retusis, petalis oppositis. *Ovarium* superum, conico-globosum, subquinelobum, 5-loculare, (loculis biovulatis, ovulis collateralibus, suspensis), in stylo subulato 5-sulcato attenuatum. *Stigma* acutum. *Capsula* (fere pentacocca), subglobosa, una cum stylo persistente, in valvis 5 loculicido-dehiscens, valvarum lateribus magis minusve reflexis, apicibus (seu styli laciniis) bipartitis. *Loculi* 5, singulo dispermo, ovulo unico plerumque abortivo. *Semina* majuscula elliptica, glabra, nitida, pallide fusca, ad hilum longe carunculata, angulo interiore loculi affixa, pendentia. *Abumen* carnosum vix copiosum. *Embryo* recta. *Cotyledones* magnæ, hemisphericæ. *Radicula* ad hilum seminis.—Arbor 25-30-pedalis (Colenso) ; ramis teretibus, rugosis, fuscis. Folia inferiora, ut videtur, opposita, superiora verticillata terna, exstipulata, coriacea, elongato-lanceolata basi attenuata brevi-petiolata, grosse serrata, supra nitida reticulatim venosa, subtus pallida opaca, venis obsoletis. Umbellæ terminales, sessiles ; radii trifidis. Pedicelli sulcati, sursum incrassati. Flores majusculi, albi.

Ixerba brexioides. *A. Cunn. Bot. of N. Zeal. in Ann. of Nat. Hist.* v. 3, p. 249.

HAB. N. Zealand, Northern Island. Skirts of woods, Wangaroa. *A. Cunningham*, 1882. Wairua*. *Mr. Colenso*. 1840.

One of the most remarkable, and perhaps the rarest of the many interesting plants of N. Zealand. Mr. Cunningham was ignorant of its fruit ; but Mr. Colenso had the good fortune to discover the plant in that state in March, 1840, and from his specimens our figure is taken. In general habit and in the structure of the flowers, there is assuredly a very great affinity, as Mr. Cunningham observed, with *Brexia* ; but I have no means of comparing it with the fruit of the latter, which is said to be " a berry with 5 cells, and the seeds attached in a triple row to the centre in each cell." With *Roussea* too, the flowers in many points agree ; but in that genus the anthers are extrorse, and the structure of the ovary seems considerably different.

Fig. 1, 2. Flowers. *f. 3, 4.* Anthers : *magnified*. *f. 5.* Mature fruit. *f. 6.* Seed : *natural size*. *f. 7.* The fruit beginning to burst open. *f. 8.* Capsule, (or in reality 5 cocci) quite burst and exhibiting the seeds. *f. 9.* Seed : *magnified*.

* So spelt by Mr. Colenso. It may be the same with Wangaroa of Mr. Cunningham.



TAB. DLXXIX.

TRIGLOCHIN FILIFOLIUM. *n. sp.*

Repens, foliis fasciculatis filiformibus scapum subæquantibus, fasciculis basi vaginatis, racemo elongato, sepalis ext. rotundatis int. ellipticis, stigmatibus acutis, capsula subglobosa triloba, loculis 3 seminiferis.

HAB. New Zealand, Northern Island. Alluvial banks, head of Waikare River, Bay of Islands. *Mr. Colenso. (n. 94).*

Among the most minute of the genus, and very distinct in its peculiarly slender filiform leaves, globose capsule, and, so far as can be seen in the dry state, in the stigmas being always acute, not penicilliform.

Fig. 1. Flower or immature fruit. *f. 2.* Fully formed fruit. *f. 3.* One of the lobes or cells:—*magnified.*



1



2



3

TAB. DLXXX.

VERONICA TETRAGONA. *n. sp.*

Fruticosa subdichotome ramosa, humilis, foliis arcte 4-fariam imbricatis ovatis obtusis carinatis superioribus basi lanosis, floribus 2-3 in apicibus ramulorum sessilibus, calycibus 4-partitis laciniis oblongis rigidis ciliatis, corollæ tubo elongato, limbi lacinia sup. bifida.

HAB. N. Zealand, Northern Island. Near perpetual snow, on the summit of Tongariro, a high and volcanic mountain in the middle of the island, gathered with many other novelties existing there, by a gentleman who visited the Church of England missionary station about three days' journey from the mountain, and who gave them to Mr. Colenso. (*n.* 63).

A singular and very distinct species of *Veronica*, of which genus no doubt other remarkable kinds will be found in N. Zealand, when the elevated mountains are more searched. Without the flowers this plant might almost be taken for *Andromeda tetragona*.

Fig. 1. Apex of a flowering branch. *f.* 2. Leaf. *f.* 3. Flower. *f.* 4. Calyx and pistil :—*magnified*.



TAB. DLXXXI.

ANGELICA? ROSEFOLIA. *n. sp.*

Suffruticosa, ramis tortuosis elongatis, foliis pinnatis pinnis oppositis subtrijugis cum impari oblique ovatis acutis acute serratis basi biglandulosis, inferioribus uno alterove raro compositis, vaginis auriculatis, umbellæ involucrio universali partialique laciniato, stylis elongatis persistentibus erectis, fructu cordato-ovato.

β. foliis trifoliolatis, foliolis angustioribus.

HAB. New Zealand (probably near the Bay of Islands), *Mr. Colenso*.—*β.* East Cape, Northern Island, *Dr. Sinclair*.

This is a very peculiar-looking umbelliferous plant, with perennial and apparently almost woody stems, deeply striated and marked below with the sheathing bases of former years' leaves. The leaves and leaflets very much resemble, at first sight, those of a rose: and when held up between the eye and the light, they are seen to be closely and beautifully reticulated with pellucid veins. The fruit seems exactly that of an *Angelica*, but the styles are singularly long and straight.

A variety of this, as I am disposed to consider it, with the same fruit, a similar structure of leaves, and corresponding small glands at the base of the leaflets, but with these leaflets only 3 on each leaf, and narrow, is found by *Dr. Sinclair* at East Cape.

Fig. 1. Flower unexpanded. *f. 2.* Fully expanded flower. *f. 3.* Petal. *f. 4.* Fruit. *f. 5.* Transverse section of ditto:—*magnified.*



Colensoanæ.

N. O. Coniferæ.

TAB. DLXXXII.

PODOCARPUS? NIVALIS. *n. sp.*

Humilis, foliis undique versis oblongis obtuse apiculatis recurvis basi attenuatis supra basi præcipue canaliculatis, subtus costa prominente marginibusque incrassatis, amentis masculis pedunculatis ternis basi bracteolatis, antheris cordatis brevi-stipitatis obtusis.

HAB. Mountain of Tongariro, Northern Island of New Zealand, near the limits of perpetual snow. Communicated by *Mr. Colenso*, (*n.* 68.)

Anxious to make known all the different kinds of the, so called, "*Pines*" of New Zealand, I here represent a new one, drawn from a very imperfect specimen, it must be allowed, but the only one yet detected, and of which Mr. Colenso has liberally deprived himself for the sake of having it thus made public. I trust Mr. Colenso himself may, ere long, have it in his power to visit the noble mountain, where alone it has been found, and then we shall be certain to possess specimens satisfactory in every particular.

Fig. 1. Upper, and *f.* 2. under side of a leaf. *f.* 3. Male amenta. *f.* 4. Single anther:—*magnified.*



TABS. DLXXXIII, DLXXXIV.

ARALIA CRASSIFOLIA. *Sol.*

Arbor, foliis polymorphis coriaceis dentatis obtusis nunc simplicibus cuneato-oblongis nunc lineari-oblongis elongato-attenuatis nunc bi-trifoliatis, floribus racemosis, racemis simplicibus compositisque umbellatis.

Aralia crassifolia. *Sol. in A. Cunn. Bot. of N. Zeal. in Ann. Nat. Hist. v. 2, p. 214.*

Aralia heterophylla. *A. Cunn. Mst.*

HAB. New Zealand, Northern Island, *Sir Jos. Banks.* Shaded woods on the shores of the Bay of Islands, Wangaroa, &c. *R. and A. Cunningham, Mr. Colenso.* Waihaké, *Dr. Sinclair.* Hokianga, *Edgerley.* Chatham Island, *Dr. Dieffenbach.*

A tree, according to Mr. A. Cunningham, from 20 to 30 feet high, with alternate leaves of a thick firm and coriaceous texture, but extremely variable in form. Our flowering specimens have them 6-8 inches long, oblong-cuneate, obtuse, variously sinuato-dentate, tapering into a short thick footstalk. Other leaves are sent with the specimens, taken probably from another part of the plant (indeed they are all of this kind on our young *living* plants), narrow, and very much elongated, from 10 inches to 2 feet long, brownish purple, blotched with green: other leaves again, which Mr. Cunningham says are from the adult plant, are bi-trifoliolate, with leaflets long and narrow, like the leaves last described. Flowers numerous. Limb of the calyx almost none. Petals ovato-cordate, coriaceous. Stamens 5. Style short. Stigma 5-lobed. Fruit the size of a small pea.

Fig. 1. Flower. *f. 2.* The same fully expanded. *f. 3.* Raceme of fruit, *nat. size.* *f. 4.* Single fruit. *f. 5.* The same cut through transversely. *f. 6.* Seed:—*all but f. 3 magnified.*





TAB. DLXXXV.

MELICOPE SIMPLEX. *A. Cunn.*

Foliis oppositis simplicibus petiolatis rhombeo-obovatis subrotundisve obtusis bicrenatis glabris, racemis simplicibus axillaribus paucifloris petiolum æquantibus. *A. Cunn.*

Melicope simplex. *All. Cunn. Bot. N. Zeal. in Ann. Nat. Hist. v. 3. p. 315.*

Astorganthus Hugelii. “*Endl.*” (*Hugel. in Litt.*).

HAB. Northern Island, New Zealand; in forests near the sources of the Hokianga River. *A. Cunningham.* Wairua, about 15 miles from Wangaree Bay. *Mr. Colenso, Dr. Sinclair.*

In the absence of fruit to my specimens, I do not venture to offer an opinion as to whether or not this is really a species of *Melicope*, with leaves reduced to a single leaflet, or the distinct genus, which I am informed, by Baron Hugel, that Endlicher has constituted of it; but where published I have no means of knowing. In my specimens, the ovary is single, which I believe is not the case in *Melicope*: but in our plant, Mr. Cunningham describes 4 carpella as constituting the fruit. In other respects, Mr. Cunningham's description quite accords with the plant here figured. I should have guessed its affinity to be with *Aurantiacææ*.

Fig. 1. Unexpanded flower. *f. 2.* Expanded flower. *f. 3.* Pistil. *f. 4.* Leaf. *f. 5.* Portion of a leaf, to show the pellucid glands:—*magnified.*



TAB. DLXXXVI.

MENODORA AFRICANA. *n. sp.*

Erecta, foliis bipinnatifidis laciniis linearibus acutis, floribus in ramis ramulisque terminalibus, calycibus multipartitis, capsulæ loculis trispermis.

HAB. Interior of S. Africa. Fat River. Fr. Feb. (n. 1341.) Macalisberg. Fl. Oct. *Burke*.

Radix fusiformis. *Caulis* suffruticosus, e basi ramosus. *Folia* opposita, vix uncialia, bipinnatifida, glabra. *Flores* solitarii, brevi-pedunculati, ex apicibus ramorum ramulorumque. *Pedunculi* scabri. *Calyx* scaber, monophyllus; *tubus* brevis turbinatus; limbus multipartitus, laciniis linearibus simplicibus vel furcatis, corolla brevioribus. *Corolla* subrotata, tubo brevi, limbo 5-lobo, lobis obovatis acutis, æstivatione contortim imbricatis. *Stamina* 2, summo tubi inserta, limbo breviora. *Filamenta* brevia. *Antheræ* ovato-oblongæ. *Ovarium* subrotundum apice bilobum. *Stylus* filiformis, exsertus. *Stigma* obtusum. *Fructus*: *Capsula* magna didyma basi calyce persistente suffulta, lobis carpellisve ovatis demum circumscissis, trispermis. *Semen* ellipticum, trigonum; testa spongiosa. *Embryo* exalbuminosa.

This curious and handsome plant is unquestionably a congener with *Menodora*, H.B.K. (Bolivaria, *Cham. et Schlecht.*), and hitherto supposed to be exclusively an inhabitant of the New World, where it is found, sparingly, from South Brazil to Texas. It is remarkable that a species should now be detected in the interior of S. Africa.

Fig. 1 & 2. Flowers. *f. 3.* Pistil and corolla laid open. *f. 4 & 5.* Didymous capsules. *f. 6 & 7.* Seeds. *f. 8.* Transverse section of ditto:—*magnified.*



TAB. DLXXXVII.

SEMONVILLEA FENESTRATA. *Fenzl.*

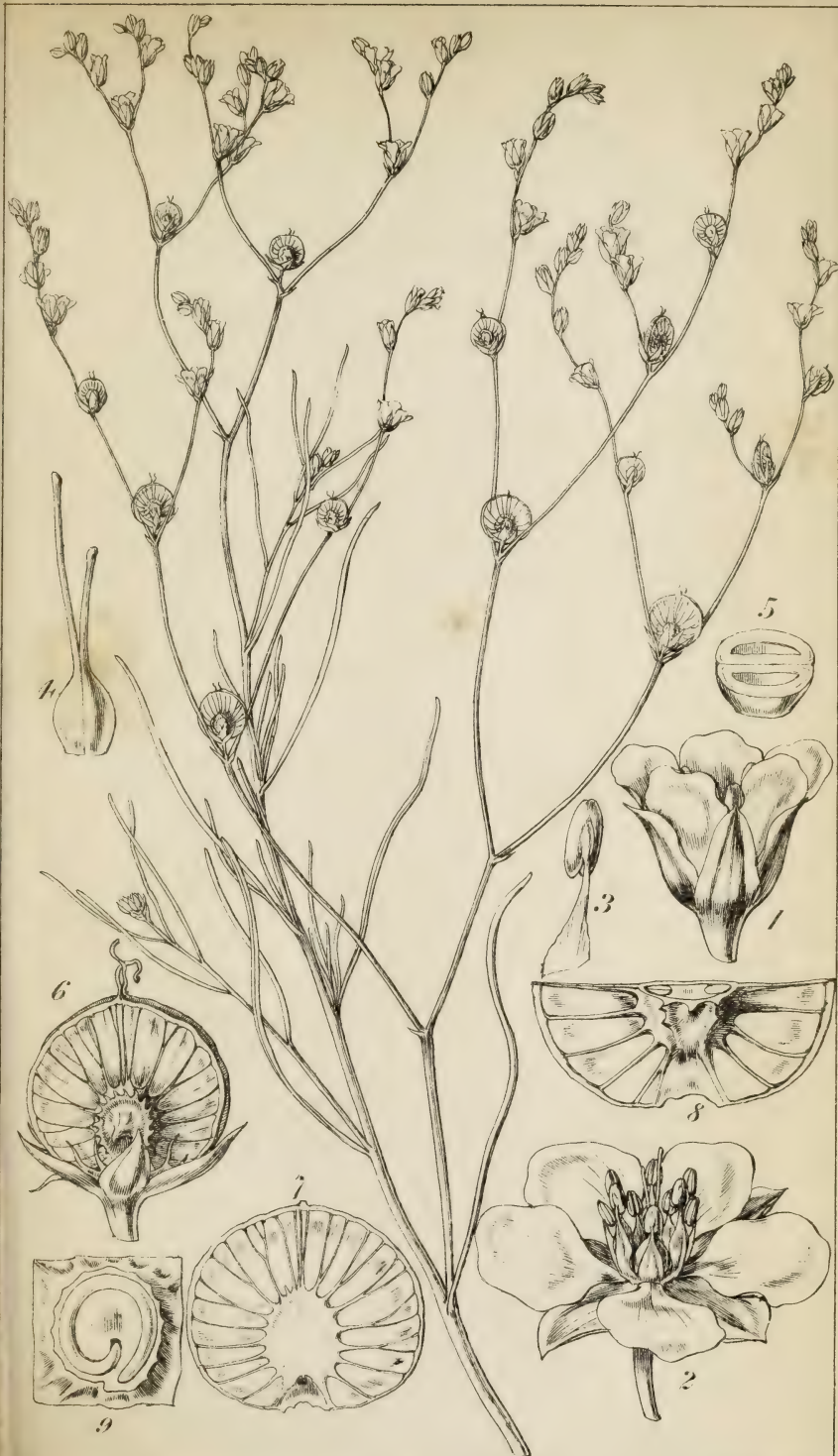
Glaberrima, ramosa, ramis virgatis in cymas axillares et terminales semel v. pluries iteratas, elongato-racemiformes solutis, foliis linearibus carnosis planis et teretiusculis, floribus ejusdem cymæ apetalis et corollatis, remotis, sepalis mucronulatis, petalis calycem subsuperantibus, carpidiis alatis cum exalatis varie alternantibus, alis orbicularibus basi apiceque retusis pellucidis, nervo rigido viridi peripherico cum aliis e disco concolori, obsoletius recte vel oblique cuspidato, radiatim emanantibus arcuatim anastomosante cinctis, facie symmetrice ideo fenestratis. *Fenzl, in Endl. Nov. Stirp. Dec. V. n. 48.*

Ditroche furcata. E. Mey. in Drège's S. Afr. Pl.

HAB. Little Namaqua Land, S. Africa, between the Koussie and Gariep Rivers (S. lat. 28° 30' and 29° 40') at an elevation of 1200—2000 feet. Drège, Pl. Cap. n. 3157. (fide Fenzl). Near the Vaal and Caledon Rivers. *Burke.*

The Genus *Semonvillea* was founded by M. Gay on the *S. pterocarpa* of Senegal, and the above character is drawn up by Fenzl in order to distinguish it from that species. In my Herbarium, Drège's specimens of this plant bear no number, but are named "*Ditroche furcata*, E. Mey.", a name which has not, so far as I am aware, yet appeared in print. *Semonvillea* will stand next to *Limeum*, Linn. (*Dicarpæa*, Presl). The fruit is an exceedingly beautiful object, with its broad pellucid band, marked with green radiating lines.

Figs. 1 & 2. Flowers. f. 3. Stamen. f. 4. Pistil. f. 5. Transverse section of the ovary. f. 6. Fruit. f. 7. Inner face of a carpel. f. 8. Transverse section of a carpel. f. 9. Vertical section of the cell:—magnified.



TAB. DLXXXVIII.

OCHNA (Diporidium) PULCHRUM. *n. sp.*

Foliis oblongo-subobovatis brevissime petiolatis utrinque acutis minute serratis ciliato-spinulosis, racemis multifloris pendulis, calyce nullo (!), petalis 6, staminibus numerosis, antheris apice biporosis.

HAB. Macalisberg, interior of S. Africa. S. Lat. 25°-26°, *Burke*, (*n.* 191.)

This is one of the many interesting new plants, brought home by Mr. Burke from his long journey into Southern Africa, as stated in the *London Journal of Bot.* v. 2. p. 163. It is the handsomest of all the genus; and its large flowers in pendent racemes must exhibit a striking appearance on the recent plant. The foliage is copious, and each leaf is edged with a cartilaginous margin, and under a lens are seen to be spinuloso-serrate. There is no calyx (unless the 3 outer petals may be so called), and then the corolla must be considered as reduced to 3 petals. Stamens very numerous. Anthers opening by two pores at the apex, and having a small struma at the base. Gynobase hemispherical, bearing the stamens, and the carpels, about 8, in a circle at the base of the style; each of the latter is one-celled and one-seeded.

Fig. 1. Portion of a leaf. *f.* 2. 3. Flowers. *f.* 4. Stamen. *f.* 5. Pistil and gynobase. *f.* 6. Ovary. *f.* 7. The same laid open:—*magnified.*



TAB. DLXXXIX.

CLEMATIS STANLEYI. *n. sp.*

Erecta, fruticosa, ubique sericeo-tomentosa, foliis tripinnatisectis laciniis oblongis acutis, panícula terminali foliosa, floribus nutantibus (inter maximos), sepalis obcordato-rotundis utrinque sericeis, staminibus numerosissimis, ovariis sericeis caudibus elongatis sericeo-plumosis.

HAB. Macalisberg, interior of South Africa. *Burke*, (*n.* 157.)

This is, assuredly, the handsomest species of an extensive and handsome genus, and deserves to bear the name of that nobleman, Lord Derby, through whose liberal patronage of natural history, the plant is made known to us. Its discoverer remarks that it forms a shrub, (apparently several feet in height), every where clothed with silky tomentum, so as to have a good deal the appearance of the silky variety of the North American *Anemone patens*. The flowers are as large as those of our Corn-Poppy, and, judging from the dried specimens, purple.

Fig. 1. Pistil:—*magnified.*



TAB. DXC.

THYSANTHA SUBULATA. *n. sp.*

Glabra, ramis erectis virgatis, foliis oppositis connatis erecto-patentibus subulatis mucronatis canaliculatis, floribus glomeratis axillaribus sessilibus, glomerulis folio duplo brevioribus.

HAB. Caledon River, S. Africa. *Burke*. Fl. Jan.

Radix parva, fusiformis, subfibrosa, annua. Caules erecti, graciles, teretes, spithamæi et ultra, basi præcipue ramosi. Folia opposita, connata, internodiis longiora, erecto-patentia, subulata, canaliculata, mucronata, dorso teretia; superiora florifera. Flores parvi, glomerati, bracteati; glomerulis folio duplo brevioribus. Calyx ad basin 5-partitus, fere 5-sepalus; sepalis lanceolato-subulatis corollam subæquantibus. Corolla campanulata, ultra medium 5-loba, lobis acuminatis, patentibus. Stamina 5, summo tubi inserta, subinclusa. Filamenta breviora: Antheræ subrotundæ. Squamæ hypogynæ nullæ. Ovaria 5, libera, ovata, compressa, stylo recurvo terminata.

This, though an undescribed species, seems quite to accord with the genus *Thysantha* of Ecklon and Meyer.

Fig. 1. Portion of the stem, with leaves and glomerules of flowers. *f. 2.* Single flower. *3.* Corolla laid open. *f. 4* Ovary:—*magnified.*



TAB. DXCI.

CHAILLETIA CYMOSA. *n. sp.*

Foliis oblongis obtusis in petiolum brevissimum attenuatis, ramis pubescentibus inferne nudis floriferis, floribus cymosis, cymis 3-5-floris paniculatis, pedunculis pedicellis calycibusque valde pilosis.

HAB. Aapges River, interior of S. Africa. *Burke.*

Frutex. Caules, ut videtur, perbreves, ramosi. Rami erecti, pubescenti-pilosi, inferne subaphylli, superne foliosi. Folia 3-4 pollicaria, subcoriacea, obtusa, subsessilia, penninervia, venulis anastomosantibus. Stipulæ subulatæ pilosæ. Paniculæ versus basin ramorum bracteatae, bracteis inferioribus subfoliaceis. Flores cymosi subglomerati. Calyx valde hirsutus fere ad basin 5-6-partitus, tubo perbrevis cum basi ovarii coalito. Petala linearia bifida, glandulis opposita. Stamina petalis alterna paululumque breviora. Antheræ loculi parallelæ, antice dehiscentes. Connectivum subincrassatum. Ovarium imo basi cum calycis tubo adhærens, ovatum, 3-loculare, loculis biovulatis; ovulis pendentibus. Stylus inferne hirsutus, superne trifidus. Stigmata obtusa.

A remarkable looking plant, nearly allied to, if not identical with, De Candolle's genus *Chailletia*.

Fig. 1. Flower. *f. 2.* The same laid open. *f. 3.* Petal, glands, and the bases of two filaments. *f. 4. 5.* Anthers. *f. 6.* Vertical section of the ovary. *f. 7.* Transverse section of ditto:—*magnified.*



Burkeaneæ.

N. O. Combretaceæ.

TAB. DXCII.

COMBRETUM SALICIFOLIUM. *E. Mey.*

Erectum glabrum, foliis oppositis oblongo-lanceolatis integerri-
mis brevissime petiolatis, floribus pubescentibus capitatis
demum spicatis pedunculatis, pedunculo folio brevior axil-
lari, calyce intus villosus, stylo incrassato staminibusque longe
exsertis.

Combretum salicifolium. *E. Mey. in Drège, Herb. Afr. Merid.*
HAB. S. Africa. *Drège.* Sunday's River. *Burke.* Fl. Nov.

I have adopted the name attached to this plant in Drège's
collections; but I am not aware that any description or charac-
ter has been given of it.

Fig. 1. Young flower. *f.* 2. Fully expanded flower. *f.* 3.
The same, laid open. *f.* 4. Young fruit:—more or less *magni-
fied.*



TABS. DXCIII, DXCIV.

BURKEA AFRICANA. Hook.

CHAR. GEN. *Calyx* 5-partitus, lobis æqualibus, æstivatione imbricatis. *Petala* 5, subæqualia, reflexo-patentia, integerima, æstivatione carinali. *Stamina* 10, corolla breviora. *Filamenta* brevissima, alterna paullo longiora. *Antheræ* oblongæ, æquales, connectivo glandulâ deciduâ apiculato. *Ovarium* subsessile villosum, biovulatum. *Stylus* brevissimus. *Stigma* oblique peltatum concavum margine undulatum. *Legumen* plano-compressum, oblongum, basi angustatum, stipitatum, tenuiter coriaceum, glabrum, indehiscens, medio leviter convexum. *Semina* in medio legumine, 1-2, ovato-orbicularia, compressa, funiculo filiformi margini cavitatis affixa. *Embryo* rectus.—*Frutex* v. *arbor* 12-15 *pedalis*. *Ramuli* crassi, breves, juniores tomento rufo vestiti. *Stipulæ minutæ*. *Folia* abrupte bipinnata, pinnis bijugis oppositis, foliolis circa 8 alternis distantibus petiolulatis oblique ovatis oblongisve obtusis, junioribus utrinque minute argenteo-sericeis, adultis coriaceis, subglabris. *Racemi* axillares, simplices, folio parum breviores. *Flores* parvi sessiles, bractea minutâ suffulti. *Sepala* margine submembranacea breviter ciliata, dorso glabra. *Petala* calyce duplo longiora, oblique ovali-oblonga, obtusa, concava. Benth.

Burkea Africana. Hook. Mss.

HAB. Macalisberg, interior of S. Africa. *Burke*. (n. 274.) *Fl.* Oct.

I am indebted to Mr. Bentham for the character of the present new genus of LEGUMINOSÆ, Tribe *Eucæsalpineæ*. I name it in compliment to Mr. Joseph Burke, who accomplished a most extensive journey into the interior of South Africa with the object of collecting plants and animals for the Right Honorable the Earl of Derby, and fulfilled his mission in so satisfactory a manner, that he is now on the point of embarking on a similar errand for Lord Derby and the Royal Botanic Gardens of Kew conjointly, to visit Hudson's Bay, and then proceed westward across the Rocky Mountains to N.W. America and California, where we trust he will be equally successful as in Africa.

I regret not to be able to figure the fruit. It was detected in another part of the Herbarium after the plate was printed. Living plants are in Lord Derby's Collection and in that of Kew.

Fig. 1. 2. Flowers. *f.* 3. Pistil. *f.* 4. Young fruits. *f.* 5. One of the same. *f.* 6. Ditto laid open :—all more or less magnified.



TAB. DXCV.

RHUS THUNBERGII. Hook.

Polygama, foliis simplicibus obovato-ellipticis retusis coriaceis parallelim venosis utrinque subtus præcipue pulverulenti-glaucis, paniculis terminalibus, pedicellis sepalis petalisque 5-6 extus pubescenti-pilosis, staminibus 5-10, fructu oblique globoso.

Roemeria argentea. Thunb. *Fl. Cap.* p. 194. (*excl. syn. Burm. Decad. Pl. Afr. t. 92. f. 1. Ecklon et Mey. Enum. Pl. Afr. Austr. p. 142. Heeria. Meisn. Gen.—Endl. Gen.—Sideroxylon argenteum. Thunb. Prodr. p. 36. Willd. Sp. Pl. p. 1090. Spreng. Syst. Veget. 1. p. 666. (excl. syn. Sersalsia obovata. Br. N. Holl.) Harvey, Gen. South Afr. Pl. p. 142.—Bumelia? argentea. Ræm. et Sch. Syst. Veget. 4. p. 499. (excl. syn. Burm.) Don, Dict. of Gard. & Bot. v. 4. p. 31. (excl. syn. Burm.)—*Cestrum venenatum*, ms. in Kew Gardens (*specimen without flower*),—*Hortus Kewensis?* 2. p. 2. (*non Willd.*)*

HAB. South Africa, Montes Paarl in Langekloof, near Cape Town, and elsewhere. Thunberg. Masson. Dr. Thom. Zeekoevalley, Clanwilliam, and in the valley of Tulbagh. Ecklon and Zeyher. Hex River. Mr. Burke. “*Kliphout*” of the colonists.

It has been the fate of this plant, which appears by no means uncommon even immediately about the Cape, to be singularly misrepresented. It has probably been seen by few of the *authors* above mentioned, and examined by none, save Ecklon and Meyer, who have rightly referred it to *Terebinthaceæ*, retaining *Roemeria* as a distinct genus of that family. An accurate examination however of the flowers and fruit (though the latter is immature) has satisfied me that it does not really differ from *Rhus*; or if *Mauria* of Humboldt can any way be separated, it might be placed there, for it bears a close affinity to *Mauria simplicifolia*, H. B. K., and scarcely less to *Rhus caustica*, Hook. et Arn. Bot. of Beechey’s Voy. t. 7.

Fig. 1. 2. Flowers varying in the number of the parts. *f.* 3. Petal. *f.* 4. Stamens and pistil, and annular disk. *f.* 5. Immature fruits (*nat. size*). *f.* 6. One of the same. *f.* 7. The same laid open:—all but *f.* 5. more or less *magnified*.





TAB. DXCVI.

TRICHINIUM REMOTIFLORUM. Hook.

Glabrum, caule elato erecto herbaceo superne paniculato angulato-striato, foliis fasciculatis lineari-subulatis mucronato-acutis, spicis elongatis, floribus solitariis remotis 3-bracteatis, bracteis lateralibus intus pilorum fasciculo demum longissimo, sepalis lanceolatis apice mucronato-spinosis margine membranaceis dorso hirsutis, antheris linearibus.

HAB. Vaal River, South Africa. Mr. Burke, (n. 105).

Ernest Meyer has a *Trichinium latifolium*, discovered by Drège in South Africa; but that is a very different plant from the present, which seems quite to agree with the character of Mr. Brown's *Trichinium*, except that I do not find the tufts of silky hairs of the perianth becoming more patent in age, and they seem to have a different origin. At the inner base of each of the side bracteas, while the flower is young, is a small tuft of hairs, much smaller than the bracteas: but as the flowers advance, these tufts increase remarkably in size, so as to attain to 4 times the length of the bracteas and almost wholly to conceal the flower, as shown at *f.* 3. It appears to me that *Eurotia Capensis* and *E. glabra* of E. Mey. n. 2914, both of Drège's Cape Plants, are allied to, if not identical with, this genus.

Fig. 1. Young flower with its bracteas. *f.* 2. Flower removed from the bracteas and laid open to show the stamens and small woolly pistil. *f.* 3. Mature flower, with the 2 tufts of hairs fully developed:—*magnified*.





TAB. DXCVII.

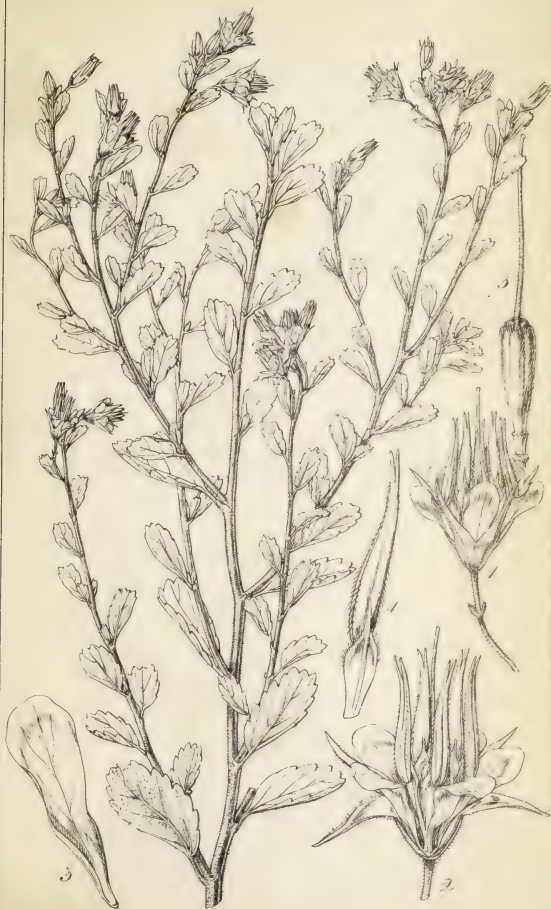
HERMANNIA BORAGINIFLORA. Hook.

Suffruticosa, erecta, pubescenti-stellata, subviscosa, foliis breviter petiolatis planis (non plicatis) obovato-cuneatis serrato-dentatis, floribus 3-4 ex axillis foliorum supremorum, pedicellis unifloris supra medium minute bibracteatis, calycibus campanulatis profunde 5-fidis post anthesin vix inflatis, laciniis lanceolato-subulatis tubo duplo longioribus, petalis cuneato-spatulatis unguibus ciliatis calyce brevioribus, staminibus longe exsertis, filamentis superne dilatatis antherisque apice bifidis ciliatis, ovario clavato piloso.

HAB. Macalisberg, S. Africa. Mr. Burke.

Macalisberg is a very remote country of Southern Africa, which has lately been visited by Mr. Burke (as mentioned at p. 163 of the London Journal of Botany, v. 2.), situated, according to this traveller's observations, between 25° and 26° of S. lat. and 27° and 28° of E. longitude. It is a very elevated and mountainous district, giving rise to several rivers, which empty themselves on the one hand into the Indian Ocean at Delagoa Bay, and on the other, by their confluence with the Gariep, or Orange River, into the Atlantic Ocean. It was here that Mr. Burke found, as might be expected, his most interesting plants, several of which are already prepared for publication in this work. The present species of *Hermannia* is remarkable for its very protruded stamens, which connive into a cone-like form, and thus give the appearance of a *Borago* or *Trichodesma*.

Fig. 1. Flower. f. 2. The same, a portion of the calyx laid open. f. 3. Petal. f. 4. Stamen :—*magnified*.





TAB. DXCVIII.

HALORAGIS CORDIGERA. *Hugel.*

Sparse deciduo-pilosa, caule basi suffruticosa, ramis erectis virgatis, foliis lineari-angustis subteretibus, floribus racemosis nutantibus, calycis turbinato 8-angulato hispido laciniis profunde cordatis marginibus lobisque præcipue reflexis, petalis unguiculatis cymbiformibus carina hispidis calyce duplo longioribus.

Haloragis cordigera. Hugel Enum. Pl. Nov. Holl. Austr. Occ. p. 45.

HAB. Swan River, Australia. *Baron Hugel, Jas. Drummond.*

This plant has been accurately described by Baron Hugel, who considers it as diœcious; but the flowers of our specimens afford both stamens and pistils, apparently perfect. The anthers are very large, and each petal is so shaped and so placed as to be completely filled by the anthers before they expand; they then fall down pendent, suspended, for a time at least, by the short unguis, while the stamens continue, for a while, erect. I find four styles to the pistil, each terminated by a capitate downy stigma. Cells of the ovary 2, each having 2 suspended ovules.

Fig. 1. Flower-buds. f. 2. Expanded flower. f. 3. Flower, from which the stamens and petals are removed. f. 4. The same laid open:—magnified.





TAB. DXCIX.

NISSOLIA FRUTICOSA. Jacq.

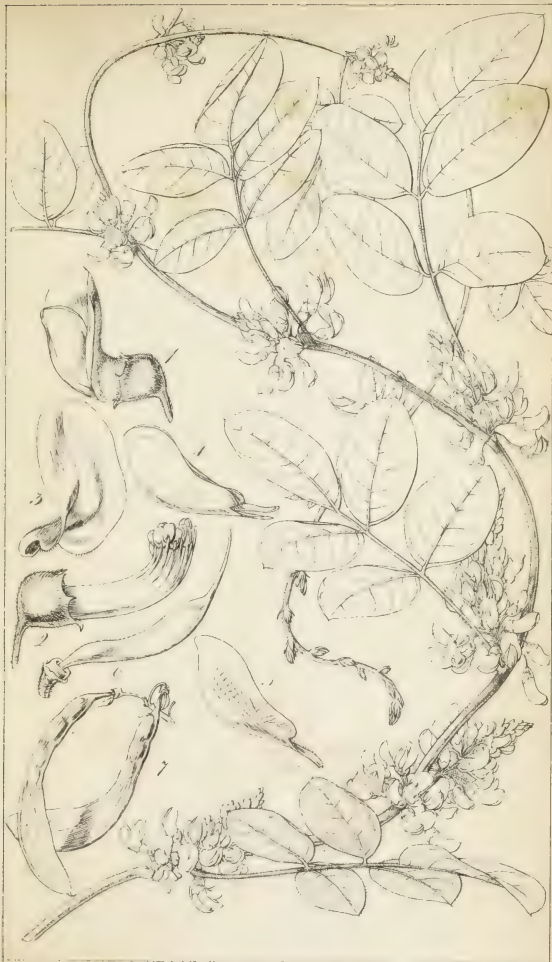
Nissolia fruticosa. Jacq. *Am.* p. 198. t. 145. f. 44. *Hort. Vind.* t. 167. *De Cand. Prodr.* 2. p. 257. *N. racemosa*. *De Cand. Prodr.* l. c. *De Less. Ic.* v. 3. t. 68. *N. hirsuta*. *De Cand. Prodr.* l. c.

HAB. Carthagena, Mexico, Santa Martha. *Jacquin, Née, Bertero, Galeotti.* Tucuman, *Tweedie.*

Caulis fruticosus, volubilis, pubescens ut magis minusve fere tota planta. *Folia* sublonge petiolata pinnata, foliolis 5 (4 cum impari), brevi-petiolulatis ovatis acutis mucronatis. *Stipulæ* cito deciduæ; pedicellis nunc axillaribus aggregatis unifloris, 3-30 verticillatis, gracilibus; nunc in racemos magis minusve elongatos dispositis (et tunc *N. racemosa*). *Calyx* brevis, subhemisphæricus, ore truncato 5-dentato, parum obliquo, dentibus minutis, inferiore paululum longiore recurvo. *Cor.* papilionacea flava. *Vexillum* ovato-oblongum obtusum, dorso pubescens. *Alæ* carinaque oblongo-falcata, unguiculatæ. *Stamina* decem, in tubum monadelphum, superne fissum, unita. *Antheræ* rotundatæ. *Ovarium* brevistipitatum, lineari-falcatum, stylo subulato terminatum. *Fructus*: *Legumen* stipitatum, 1-4-spermum, 1- aut transversim pauciloculare, desinens in alam membranaceo-foliaceam, falcata, legumine duplo latius.

Botanists seem now to be agreed that the genus *Nissolia* should be confined to the first section of De Candolle, "*Nissoliaria*;" the other species being referred to *Machærium*. Of the three species in that section, Mr. Bentham has, in my Herbarium, if not elsewhere, recorded his opinion that two out of the three constitute but one species; or, in other words, that *N. racemosa* is only a variety of the original *N. fruticosa*. Indeed I possess the two forms on a single specimen. The remaining one, *N. hirsuta*, I have myself ventured to unite with it, differing, as it does, only in a little more hairiness.

Fig. 1. Flower. *f.* 2. The same, the corolla being removed. *f.* 3. The vexillum. *f.* 4. The alæ. *f.* 5. The carina. *f.* 6. The pistil:—*magnified.* *f.* 7. Fruit:—*nat. size.*



TAB. DC.

Ranunculus pilulifer. n. sp.

Humilis, annuus, pilosus, caulibus filiformibus basi præcipue ramosis, foliis remotis longe petiolatis basi vaginantibus subtritermatim sectis, laciniis oblongo-ovatis acutis sæpe bifidis, floribus minutis axillaribus solitariis sessilibus, capitulis globosis, carpellis oblique ovatis compresso-carinatis rugosis stylo brevi uncinato terminatis.

HAB. Swan River settlement. *Jas. Drummond*. (n. 9.)

A small, but very distinct and well marked species of Crowfoot. The flowers are so minute that the real structure of the sepals and petals cannot, in the dried state, be correctly described; but they are succeeded by globose heads of carpels, which are very conspicuous upon the slender stems. Each carpel is wrinkled, scarcely tuberculate, laterally compressed, the back, or keel, forming a thickened edge.

Fig. 1. Flower. *f. 2.* Head of carpels. *f. 3.* Single carpel : —more or less *magnified*.





ICONES PLANTARUM;

OR

FIGURES,

WITH

BRIEF DESCRIPTIVE CHARACTERS AND REMARKS,

OF

NEW OR RARE PLANTS,

SELECTED FROM THE AUTHOR'S HERBARIUM.

By SIR WILLIAM JACKSON HOOKER, K.H.,

LL.D., F.R.A., AND F.L.S.

VICE-PRESIDENT OF THE LINNEAN SOCIETY,

MEMBER OF THE IMP. ACAD. NAT. CUR., ETC., ETC., ETC.

HONORARY MEMBER OF THE ROYAL IRISH ACADEMY, OF THE ROYAL MEDICAL AND
CHIRURGICAL SOC. OF LONDON, ETC., ETC.

AND

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TAB. DCCI.

TRICHOMANES ELONGATUM. *A. Cunn.*

Cæspitosum erectum rigidum atro-viride, frondibus ovatis bi-pinnatis, pinnulis arcte approximatis imbricatis oblongo-cuneatis inciso-pinnatifidis, segmentis brevibus acutis sæpe bifidis, involucris copiosissimis supra-axillaribus in pinnularum sinubus cylindraceis liberis basi attenuatis, ore integro vix patente subbilabiato, receptaculis exsertis longissimis curvatis, stipite rachique teretibus ubique glabris.

Trichomanes elongatum. A. Cunn. Nov. Zel. in Hook. Comp. Bot. Mag. 2, p. 368; Hook. Sp. Fil. 1, p. 134.

HAB. New Zealand, Northern Island. *A. Cunningham, Colenso, J. D. Hooker, and others.*

Perhaps it is not correct to speak of this as an erect-growing Fern. The frond seems to be decurved, probably pendent, from the face of rocks, thus presenting to view the under-side, which is most copiously studded with fructifications, and the remarkably elongated (and also curved) receptacles, whence the name *Tr. elongatum* was given to it by its original discoverer. It evidently belongs to the same group as *Tr. rigidum*, Sw.; and though truly distinct, the two plants are more easily discriminated by the eye than by words.

Fig. 1. Stipites, to show their aggregate or tufted mode of growth. *f. 2.* Frond. *f. 3.* Portion of a fertile pinna:—*magnified.*



TAB. DCCII.

TRICHOMANES GIGANTEUM. *Bory et Willd.*

Cæspitosum ? erectum elongatum, frondibus late obovato-lanceolatis bipinnatis, pinnis primariis distantibus lanceolatis acuminatis elongatis, secundariis (pinnulisve) ovatis, infimis superioribus rachi appressis subtripinnatifidis, segmentis linearibus obtusis, involucris supra-axillaribus subcylindræis liberis paululum alatis, ore integro subpatente, rachi terete supra canaliculata immarginata stipiteque terete pilosis, pilis mollibus sparsis fuscis.

Trichomanes giganteum. *Bory in Willd. v. 5, p. 514; Hook. Sp. Fil. 1, p. 137.*

T. Mauritanum. *Flugge mss. (Willd.)*

HAB. Isle of Bourbon. *Bory, Carmichael.*

My specimen of this is from Captain Carmichael; and it wants the lower part of the stipes, so that I am ignorant of the nature of its root. The frond is fourteen inches long (much larger than Willdenow describes it), dark brown, flaccid, truly bipinnate; the ultimate segments and involucre as in *T. strictum*, Menz. (Hook. and Grev. Ic. Fil. t. 122), but the former are more compoundly divided and more flaccid.

Fig. 1. Upper portion of a frond. *f. 2.* Apex of the same frond; *nat. size.* *f. 3.* Segment with involucre :—*magnified.*



TAB. DCCIII.

TRICHOMANES POLYANTHOS. *Hook.*

Cæspitosum elatum rigidum, frondibus oblongis v. ovato-lanceolatis attenuatis inferne pinnatis, pinnis lanceolatis horizontaliter patentibus subfalcato-decurvis bi-tripinnatifidis, segmentis lineari-obtusis, involucris supra-axillaribus copiosis magnis liberis campanulatis superne præcipue tenuissime membranaceis, ore patente, receptaculis brevissimis omnino inclusis, stipite rachique tenui-marginata subrobustis scabris subhispidisque.

Trichomanes polyanthos. Hook. Sp. Fil. 1, p. 138.

Hymenophyllum polyanthos. Hook. in Nightingale's Oceanic Sketches, App. p. 132 (not Sw.)

HAB. Pacific Islands. *Sir Thomas Nightingale.*

Stipes 3-4 or 5 inches long, very stout, relatively to other species of the genus, as is also the rachis. Frond 1 foot high, 4-5 inches broad, very remarkable in the nature of its involucre, which are quite unlike any others, large, exactly campanulate, glossy, membranaceous, especially the upper pellucid half, in texture and form more resembling those of *Hymenophyllum* than *Trichomanes*, but they cannot be said to be 2-valved. The receptacles are also entirely, and in every instance, included within the involucre.

Fig. 1. Lower portion of a frond ; *nat. size.* *f. 2.* Fertile segments. *f. 3.* Involucre :—*magnified.*







TAR. DCCIV.

TRICHOMANES SMITHII.

Cæspitosum erectum subflaccidum, frondibus gracillimis lanceo-
latis pinnatis, pinnis inferioribus remotis brevibus superioribus
approximatis omnibus subpalmato-multifidis, segmentis elon-
gatis remotis patentibus ultimis magis elongatis, cellulis
magnis lineari-elongatis transversis in lineas latas seu maculas
elongatas longitudinales obliquas dispositis, ad margines
solummodo cellulis subquadratis, involucris supra-axillaribus
in laciniis brevibus terminalibus anguste urceolatis coriaceis
brunneis inferne alatis, ore patente, stipite filiformi subhirsuto
demum glabro.

Trichomanes Smithii. *Hook. Sp. Fil.* 1, p. 138.

Trichomanes angustatum. *J. Sm. En. Fil. Philipp. in Hook.
Journ. Bot.* v. 3, p. 417 (not Carm).

Abrodictyum Cumingii. *Presl, Hymenoph.* p. 20, tab. 7.

HAB. Philippine Islands. *Cuming, n.* 208 and 358.

Stipes slender, dark-brown or black, 1-3 inches high, some-
times slightly crisped. Fronds scarcely a span long, extremely
delicate; lower pinnæ gradually becoming smaller, remote,
bearing however sori, with a few short narrow segments, divided
from the very base, and spreading; upper ones much larger,
more crowded, the segments also rather broader and more
elongated, especially the ultimate ones. The cellular texture of
this is quite peculiar, so far as I know, among the *Hymeno-
phyllaceæ*, and is best understood by our magnified figures. It
is so remarkable that Presl has therefrom constituted a new
genus, *Abrodictyum*.

Fig. 1. Plant; *nat. size.* *f. 2.* Fertile segment; *magnified.*
f. 3. Portion of the same, more highly *magnified.*







TAB. DCCV.

TRICHOMANES MELANORHIZON. Hook.

Caudice repente radicibusque ramosis numerosis densissime nigro-tomentosis, frondibus brevibus ovatis subsessilibus pinnatis, pinnis bipinnatifidis, segmentis anguste linearibus acutis glabris, involucris in axillis segmentorum superiorum urceolato-cylindraceis subimmersis, ore bilabiato, labiis semiorbicularibus, receptaculo longe exserto.

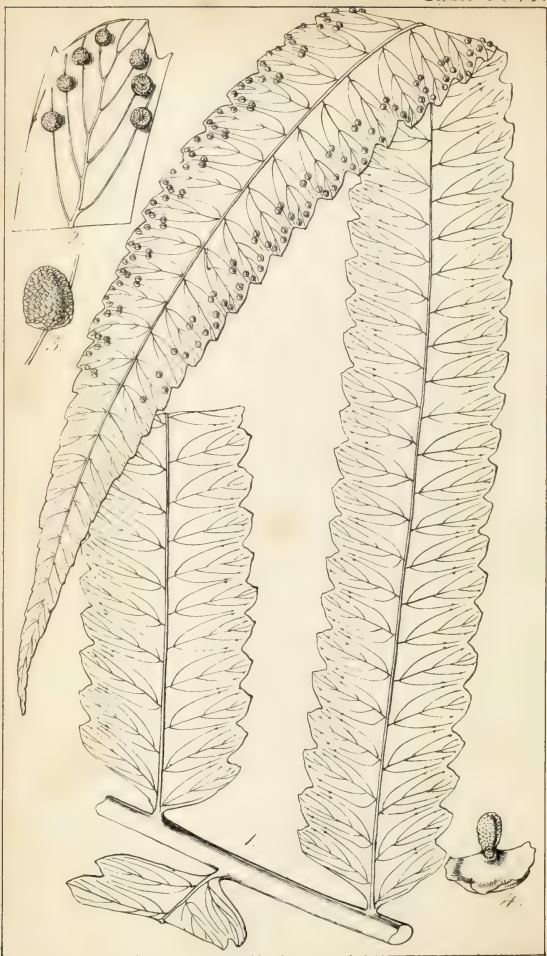
Trichomanes melanorhizon. Hook. *Sp. Fil.* 1, p. 140.

T. bilingue. J. Sm. *En. Fil. Philipp.* in Hook. *Bot. Journ.* v. 3, p. 417. (*not Hook.*)

HAB. Leyte, Philippine Islands. *Cuming*, n. 316.

Caudex and the short but copious, branching, fibrous roots quite velvety with black woolly hairs. Stipes scarcely $\frac{1}{2}$ an inch long. Fronds 3 inches. Pinnæ rather distant, sometimes opposite, very slightly decurrent. Rachis terete. Segments narrow. Involucres confined to three or four of the ultimate segments; the mouth, with 2 rather distinct lips, very obtuse, but otherwise somewhat resembling those of *T. Filicula*, Bory (*T. bilabiatum*, Nees), from which however in other respects the plant is evidently different.

Fig. 1. Plant; *nat. size.* *f. 2.* Portion of a fertile pinna:—*magnified.*



TAB. DCCVI.

HEMITELIA LINDENI. *Hook.*

Inermis, frondibus pinnatis, pinnis elongatis ensiformibus acuminatis basi oblique cuneatis sessilibus marginibus pinnatifido-lobatis lobis triangularibus acutis, soris pluralibus seu inordinatim dispositis marginem versus totam longitudinem pinnarum fere occupantibus, venulis omnibus liberis.

HAB. Caraccas. *Linden, n. 663.*

Since the publication of the genus *Hemitelia*, in our "Species Filicum," the present one has come to our knowledge in a late packet of Mr. Linden's Caraccas plants. Its nearest affinity is assuredly with *H. speciosa*, Kaulf. (*Cyathea, H. B. K.*) and of our *Sp. Fil.* p. 28, t. 13, B.; but it will be at once recognized as distinct from it by the deeply-lobed, almost pinnatifid, margins of the pinnæ, and by the different appearance of the fructifications. In *H. speciosa*, as seen in the figure just quoted, the sori form an almost continued line at a slight distance from the crenato-sinuated margin; here they constitute a broad band, occupying almost one half of the portion between the margin and the costa.

Fig. 1. Portion of a frond; *nat. size.* *f. 2.* Portion of a pinna. *f. 3.* Perfect sorus. *f. 4.* Sorus with involucre, the capsules being removed:—*magnified.*





TABS. DCCVII, DCCVIII.

HIBISCUS (ABELMOSCUS) TULIPÆFLORUS. Hook.

Arboreus, ramis pubescentibus, foliis amplis profunde cordatis angulato-5-lobis subseptemnerviis, stipulis amplis rotundatis deciduis, pedunculis solitariis axillaribus unifloris petioli longitudine, involucri 7-8-phylli foliolis ovatis patentibus undulatis, calyce profunde 5-lobo lobis ovatis acutis 3-nerviis erectis, flore specioso, petalis obovato-rotundatis striatis sericeo-pubescentibus, staminibus in tubum valde elongatum congestis, stigmate 5-lobo lobis globosis velutinis.

HAB. Island of Dominica, West Indies. *Dr. Imray, n. 251.*

This is one of the finest species of *Hibiscus* that has come under my observation; nor have I ever seen it except in the collections of my friend Dr. Imray from Dominica. It is remarkable in the large size of the leaves and stipules and flowers, which latter are solitary on long and thickened, very downy peduncles. The involucre consists of 7-8 nearly ovate, spreading, downy, waved leaflets. The calyx is almost campanulate, deeply 5-lobed, almost 5-partite; the lobes ovate, acute, 3-nerved. Petals large, spreading, rose-colour. Column of stamens exceedingly long, tubular. Style a little longer than the staminal tube, terminated by five obtuse, rounded, velvety lobes.



TAB. DCCIX.

HOSTMANNIA ELVASIOIDES. *Planch.*

CHAR. GEN. *Calyx* 3- sæpius 4-phyllus, foliolis coloratis, concavis, æstivatione imbricatis, post anthesin reflexis, persistentibus. *Petala* 4-6 (in eodem specim.) anguste obovata, sepalis paulo longiora. *Stamina* 18-22, hypogyna; *filamentis* persistentibus, *antheris* apice biporosis, caducis. *Ovarium* simplex (non gynobasicum!) biloculare! *Ovulum* in loculo quoque unicum, anatropum, resupinato-suspensum (ut in *Euonymis* quibusdam). *Stylus* terminalis, simplex, apice brevissime bidentatus. *Fructus* —Frutex? *glaberrimus*; foliis alternis, petiolatis, ellipticis, acuminatis, margine revolutis, integerrimis, chartaceis, nitidis, venulis transversis pulchre striatis; stipulis in unicam intra axillarem bidentatam coalitis; paniculis ramos foliatis terminantibus; floribus pedicellatis, aureis; bracteolis scariosis acutissimis panicule ramos et pedicellos stipantibus.

Hostmannia elvasioides, *Planch.*

HAB. Prope Surinam leg. *Dr. Hostmann*, cui genus merito dicatum.

The genus I have now described is remarkable for combining in itself alone all the characters which appertain in detail to the other genera of the family. In habit, inflorescence, and the ovary not gynobasic, it resembles *Elvasia*, and like it has the mode of growth of *Gomphia*; while the variable number of floral parts, the indefinite stamina, the persistent nature of the filaments, and the precocious fall of the anthers, are points in common with the true *Ochnæ*. Lastly, one character is peculiar to this genus among the *Ochnaceæ*, the 2-celled ovary, in which the ovules appear to be suspended, though they are in fact normally ascending ovules, which, finding no space for development except towards the base of the cell, assume the resupinate position first noticed by Mr. Robert Brown among the ovules of certain *Euonymi*, and which I have myself remarked in the *Laurus nobilis*. In these different instances the raphe of the ovule, instead of looking towards the placenta, as usual in mono-spermous cells, is on the contrary turned in an inverse direction. If we imagine these ovules set up again, they will be in their normal position, with the raphe facing the placenta. And what we see might have been the case with the ovary of *Hostmannia*, is what nature has realized in the gynobasic ovaries of *Ochna* and *Gomphia*, where the ovules are permitted to assume an ascending posture. *J. E. Planchon.*

Fig. 1. Flower. *f. 2.* Stamen. *f. 3.* Pistil. *f. 4.* Vertical section of the ovary. *f. 5.* Transverse section of ditto :—*magnified.*



TAB. DCCX.

PHILAGONIA FRAXINIFOLIA. *Hook.*

Dioica, foliis impari-pinnatis glabris, foliolis elliptico-oblongis acuminatis subserratis basi obliquis lateralibus subsessilibus terminali sublonge petiolato, paniculis cymosis pubescentibus axillaribus terminalibusque folio brevioribus, floribus tetrameris (nunc pentameris), petalis intus sericeis.

Tetradium? fraxinifolium. *Wall. in Herb. Hook.* 1821.

Rhus fraxinifolium? *Don, Prodr. Fl. Nep. p.* 248.

HAB. Nepal. *Dr. Wallich*, 1821.

My specimens of this plant are but imperfect; and I refrain from making any observations on the genus further than that the plant seems perfectly to accord with *Philagonia* of Blume, except in having the flowers sometimes pentamerous. It may be the *Rhus* above quoted of the late Mr. Don, though assuredly the style and stigma do not correspond with that genus.

Fig. 1. Female flower. *f. 2.* Ovary, cut through transversely:—*magnified.*



TAB. DCCXI.

EUTHEMIS LEUCOCARPA. Jack.

CHAR. GEN. *Calyx* 5-phyllus, foliolis ciliatis, æstiv. quincunciali. *Petala* 5, hypogyna, foliolis calycinis alterna, æstivatione convoluta, sub anthesi patentia. *Stamina* 5, petalis alterna, rarius filamentis sterilibus totidem interjectis (teste Jack). *Antheræ* sessiles, basifixæ, subtetragonæ, biloculares, apice attenuato poro unico apertæ. *Ovarium* oblongum brevissime stipitatum, stylo filiformi persistente superatum, quinqueloculare, marginibus carpellorum introflexis, versus axim fructus contiguus, non coadunatis. *Ovula* in loculo quoque 1-2 anatropa, juxta angulum internum lateraliter septis inserta, suspensa. *Bacca* farinoso-pulposa, pentapyrena; pyrenis fibrosis, monospermis. *Semina* inversa, albuminosa, embryone fere longitudine seminis; radícula supera, cotyledonibus longiore.—Frutices *Indici*; foliis alternis, pulcherrime striato-venulosis, petiolo dilatato semi-amplexicauli; stipulis lateralibus ciliatis, caducis; racemis simplicibus vel basi ramosis, terminalibus, demum rami evolutione oppositifoliis; floribus numerosis, roseo-albis, pedicellis plerumque geminatis, basi bractea bracteolisque duabus suffultis.—Species 2, in sylvis Singaporensibus, Insula Penang et penins. Malaccens. observatæ.

Euthemis leucocarpa; foliis lanceolatis pulchre spinuloso-serratis, racemis basi ramosis, baccis niveis globosis.

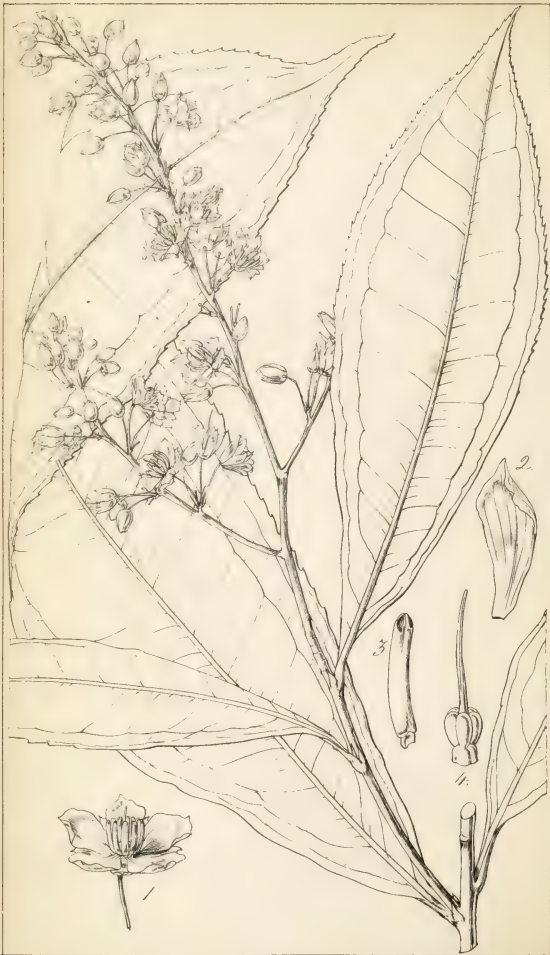
Euthemis leucocarpa. Jack, in Hook. Bot. Misc. v. 2, p. 69.

HAB. Singapore (*W. Jack.*) et Mont. Ophir penins. Malaccensis, *Lobb.* in Herb. Hook.

No analogy can be more striking than that which exists between the charming shrubs which compose the group of *Sauvagesiæ* and the present beautiful genus. The alternate, firm, shining, ciliated or cartilaginous-serrated foliage, petioles dilated at the base and accompanied by hairy stipules, corymbs of flowers which become lateral by the development of the branches, sepals generally coloured and ciliated, petals twisted in æstivation, tetragonous and almost sessile anthers nearly or quite sessile and opening by a terminal pore, a shortly stipitate ovary surmounted with a filiform persistent style, anatropous suspended ovules, perispermous seeds having a straight embryo in the axis; all these are characters possessed in common by *Euthemis* and *Luxemburgia*. If the stamens in the latter genus are indefinite and collected in a single mass, if the cells are incomplete towards the upper part and only to the number of three, finally, if the fruit is capsular and many-seeded, the first of these characters is a deviation from symmetry, of which there is no trace in *Sauvagesiæ*. *Euthemis*, with its definite stamens symmetrically arranged, occasionally presenting a few sterile filaments, forms the intermediate passage from the true *Sauvagesiæ* to the slightly abnormal genus *Luxemburgia*.—*J. E. Planchon.*

TAB. DCCXI. Branch, from which the stipules have fallen. *Fig. 1.* Part of a leaf. *f. 2.* Flower. *f. 3.* The same, laid open. *f. 4.* Ovary:—all magnified.





TAB. DCCXII.

GOMPHIA SUMATRANA. Jack.

Glaberrima, foliis obovato-lanceolatis chartaceo-membranaceis nitidissimis, ab apice infra medium denticulatis, venulis prominulis utrinque in nervos 2 conspicuos margini folii parallelus confluentibus, stipulis intrapetiole decedentibus, paniculis terminalibus, alabastris ovatis.

Gomphia Sumatrana. Jack, *Malay. Pl. in Hook. Bot. Misc. v. 2, p. 77* (non Wall. cat. n. 2803 *cujus spec. in Herb. Hook. ad Gomph. angustifolium Vahl, referendum videtur*).

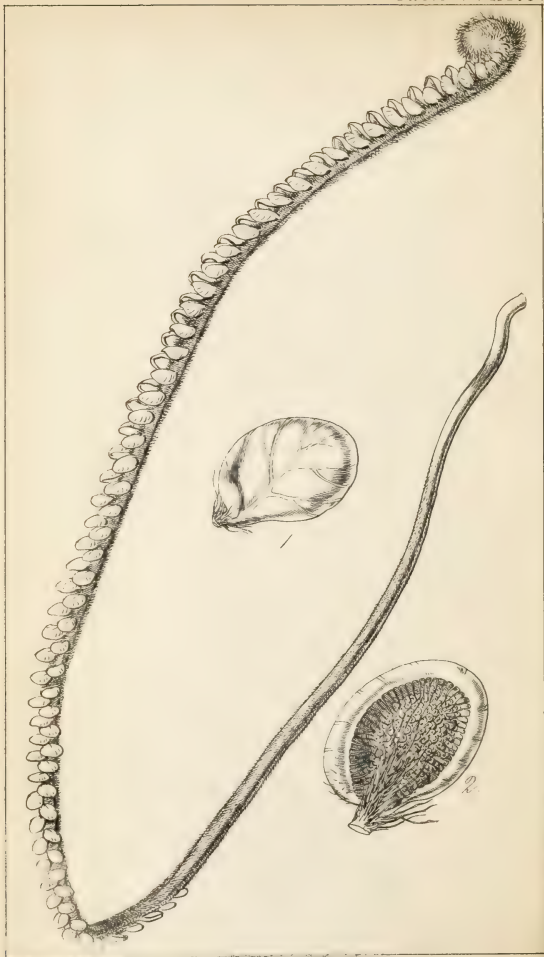
HAB. In Insul. Sumatra, Jack, et in Herb. Hook.

The elegant plant here figured approaches very closely the *Gomphia angustifolia*, Vahl., to which Messrs. Wight and Arnott refer, as mere synonyms, the *G. Malabarica*, and *G. Zeylanica*, of De Candolle, and even the *Walpera* of Gærtner. A careful comparison of the Malayan species with the *G. angustifolia* of Ceylon, removes however all doubt from my mind of their specific distinctness. The leaves of the former are sufficient to distinguish it; they are broad, and both firm and delicate, and the transverse veinlets which mark their glossy surface run together on each side in a line parallel to the margins, and very clearly defined. The foliage in *Gomphia angustifolia* is much smaller, closer set on the branches, more coriaceous, and the little transverse veins are delicate, numerous, and with hardly perceptible marginal nerves. In the Sumatran species, the panicle is elongated, and the buds ovoid; in the other, the panicle is much contracted and the buds nearly globular. These distinctions, though appearing almost too slight to be named in a specific character, are yet very evident in the specimen itself; and they seem to me adequate to mark the two species of this large and noble genus, and which banished, so to speak, from their native country, figure in the Flora of India, together with several individuals of the true genus *Ochna*.—J. E. Planchon.

Fig. 1. Flower. f. 2. Petal. f. 3. Stamen. f. 4. Pistil:—*magnified*.







TAB. DCCXIII.

JAMESONIA CINNAMOMEA. Kze.

Robusta pinnata, stipite breviusculo compresso canaliculato, rachide crassa densissime ferrugineo-lanosa, pinnis omnibus secundis imbricatis rotundatis basi cordatis coriaceis supra convexis lateribus deflexis marginibus insigniter revolutis longe ciliatis costa subtus setoso-paleaceis, soris linearibus convolventibus discum subtus totum obtegentibus.

Jamesoniana cinnamomea. Kunze, in *Bot. Zeit.* 1844, p. 738.

HAB. El Equador. Abundant on the eastern flank of Cotopaxi, at an elevation of 1,400 feet above the sea-level, growing in company with *Culcita*, *Ribes frigidum*, &c. Prof. W. Jameson, n. 12; Columbia, Hartweg, n. 1516.

A very different species from *Jamesonia pulchra*, figured in *Icones Filicum*, tab. 178. And since our figure was prepared we find that Professor Kunze has published the n. 1516 of Hartweg's collection in the "*Gazette Botanique de Berlin*," under the name of *J. cinnamomea*, together with *J. scalaris* (Caraccas, Linden, n. 519), *J. verticalis* (Columbia, Hartweg, n. 1504), and two species "*fronde pinnata*," namely, *J. paleacea* (Caraccas, Linden, n. 505), and *J. hispidula* (Caraccas, Moritz, n. 72), making six species in all. To me a further examination of this beautiful genus seems to lead to the conclusion that its affinity is with *Gymnogramma*; for the normal form of the sori appears to be oblong or linear, though generally confluent, and frequently covering the whole disc of the pinnule beneath. The present species is much larger and stouter than *J. pulchra*; the silky wool is altogether of a deep ferruginous brown colour, shorter and more compact; the pinnæ are singularly thick and coriaceous, and all point forwards, and more or less downwards, and imbricate each other. Veins forked.

TAB. DCCXIII. Plant; nat. size. Fig. 1. Upper side of a pinna. f. 2. Under side:—magnified.



TAB. DCCXIV.

JUNCUS ANDICOLA. Hook.

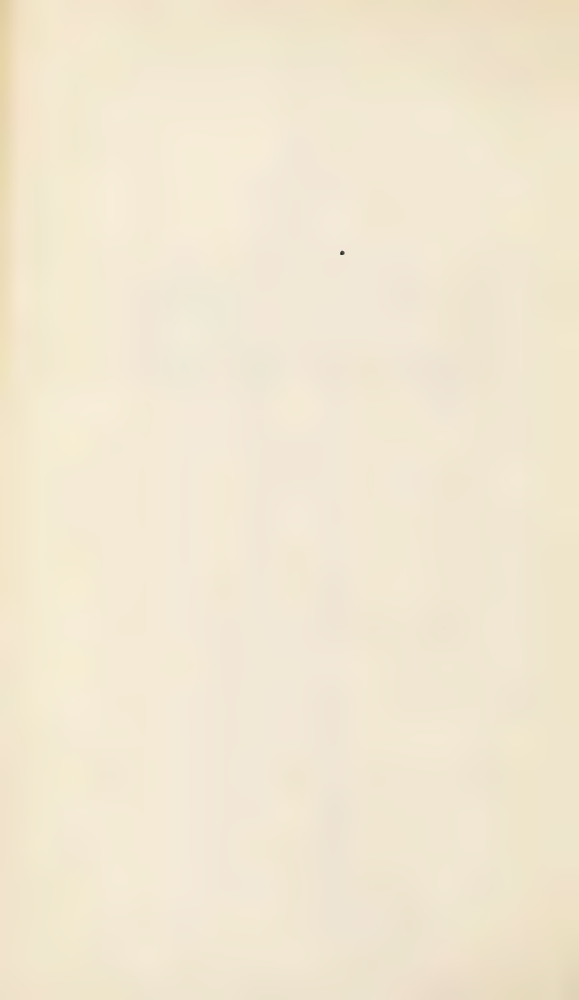
Aphyllus, culmis lævibus acutis pungentibus inferne longe laxaque vaginatis, vaginis cylindraceis fissis membranaceis obtusis, panícula supradecomposita subglobosa densa subsessili tota intense fusca nitida, bracteis ovatis obtusis, floribus 6-andris, sepalis lanceolatis acuminatis dorso margineque pallidis, filamentis basi dilatatis, ovario obovato-trigono in stylum subæque longum attenuato, stigmatibus 3 subulatis papillosis.

HAB. Andes of Quito. *Prof. W. Jameson, n. 51.*

This has the habit of our European *J. conglomeratus*, (*J. communis*, *E. Mey. and Kth.*), but appears to me truly distinct. It is a shorter and stouter plant, particularly stout at the base, quite smooth (not striated) on the surface, clothed with long, lax, membranaceous, leafless sheaths, for nearly half the height from the base. At about three inches below the sharp point, and from a small cleft with a small leaf-like cuspidate bractea at its base, arises the dense, conglomerate, very compound, subglobose panicle, altogether of a dark brown colour and glossy. Ramifications clothed with ovate bracteas, much shorter than the sepals, which latter are lanceolate, sharply acuminate, with a pale line at the back and a pale margin. Stamens 6. Filaments broad, subulate. Anthers oblong, yellow. Ovary with a much longer style than in *J. conglomeratus*.

The *Juncus Bogotensis*, H. B. K. is now referred by M. Kunth to *J. conglomeratus*, and the description is much at variance with our plant.

Fig. 1. Flower. f. 2. Stamen. f. 3. Pistil:—magnified.





TAB. DCCXV.

ACROSTICHUM (ELAPHOGLOSSUM) CARDIOPHYLLUM. *Hook.*

Caudice longe repente ferrugineo-squamoso, stipitibus gracilibus squamosis, frondibus fertilibus sterilibusque cordatis marginatis obtusis obscure venosis sparsim squamulatis, squamulis subulatis atris.

HAB. Andes of Quito. *Prof. W. Jameson, n. 212.*

This *Acrostichum* belongs to the same group with *A. ovatum*, Hook. and Grev. Ic. Fil. t. 146, and *A. squamipes*, Hook. Ic. PLANT. v. 2, TAB. CXCVII., especially the latter, from Chacapoyas, Peru; but it is distinguished from both by the larger size, different form of the fronds, and by the nature and extent of scaly clothing. In our present species the fronds are truly cordate, and they are but sparingly dotted with distant, black, subulate scales.



TAB. DCCXVI.

SIPHOCAMPYLUS GIGANTEUS. Cav.

Pubescens, caule ramoso, foliis elongato-lanceolatis dentatis rugosis longe acuminatis basi in petiolum brevem attenuatis subsessilibus, pedunculis axillaribus solitariis unifloris folio brevioribus, flore magno, calycis tubo turbinato laciniis lanceolato-subulatis tubo subtriplo longioribus, corolla sursum ampliata curvata superne fissa 5-loba, lobis ovato-acuminatis, columna staminea longe exserta, antheris superne præcipue villosissimis.

Siphocampylus giganteus. Don, *Dict.* 3, p. 702; *De Cand. Prodr.* 8, p. 406.

Lobelia gigantea. Cav. *Ic. vol.* 6, *tab.* 513; *H. B. K. Nov. Gen. Am.* 3, p. 305.

HAB. Andes of Quito. *Prof. W. Jameson, n.* 248.

Decandolle observes of the *Lobelia* (*Siphocampylus*) *fætida*, H. B. K.—“*S. giganteo* affinis:” and indeed I scarcely see how they are to be distinguished. Our present plant, however, seems to be decidedly the species of Cavanilles, and is very striking, both from the length of its leaves and great size of its flowers.







TAB. DCCXVII.

VACCINIUM MUSCICOLA. Hook.

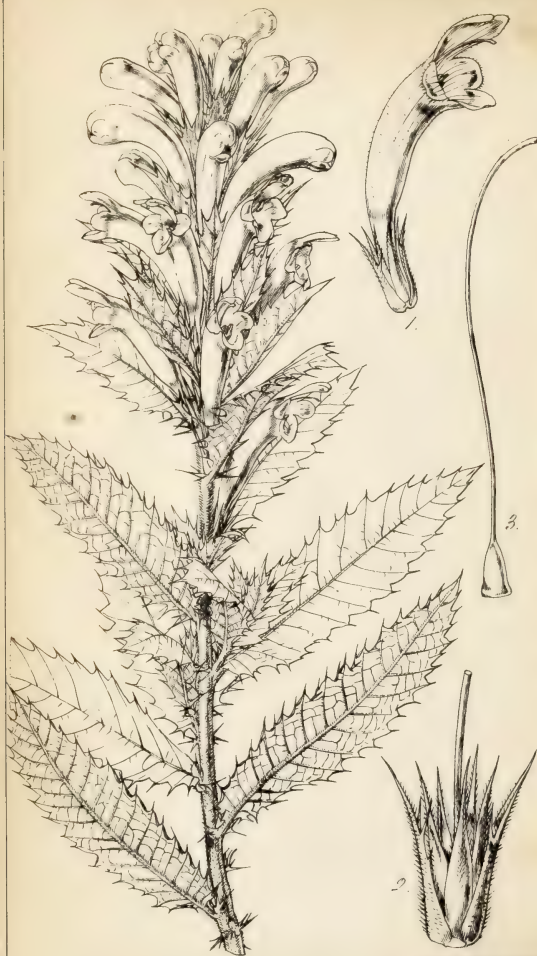
Ramulis teretibus pubescenti-pilosis, foliis rotundato-ovatis acutis subsessilibus carnosis integerrimis basi subquinque-nerviis, pedicellis geminis gracilibus folium subæquantibus ebracteatis (nisi ad basin) unifloris, calycis tubo inferne ovario adhærente pubescente superne libero glabro, dentibus acutis, corolla tubuloso-urceolata (coccinea) 5-dentata glabra, antheris elongatis muticis apice bifidis.

HAB. Western flank of Chimborazo, at the superior limit of the forest, 13,000 feet above the sea-level, growing from the trunks of trees, where the roots are enveloped in moss.
Prof. W. Jameson, 1844 (very rare).

This is a most distinct species of *Vaccinium*, an epiphyte, growing among moss at the upper limits of the forests of Chimborazo. The leaves when living, Dr. Jameson informs me, are fleshy; this occasions them to fall off so readily when drying, in which state they are not subcoriaceous but semi-pellucid, exhibiting lateral nerves (of which there are two principal ones on each side at the base) that become incurved before they reach the margin and anastomose with those above. In their areoles are copious, much branched, lesser veins, which have a downward direction, and of which the ultimate veinlets are free. The corolla is between cylindrical and urceolate, of a bright red colour, 5-toothed at the apex, and the teeth are hairy, like those of the calyx.

Fig. 1. Flower. *f. 2.* Section of the calyx, showing the pistil.
f. 3. Stamens :—*magnified.*





TAB. DCCXVIII.

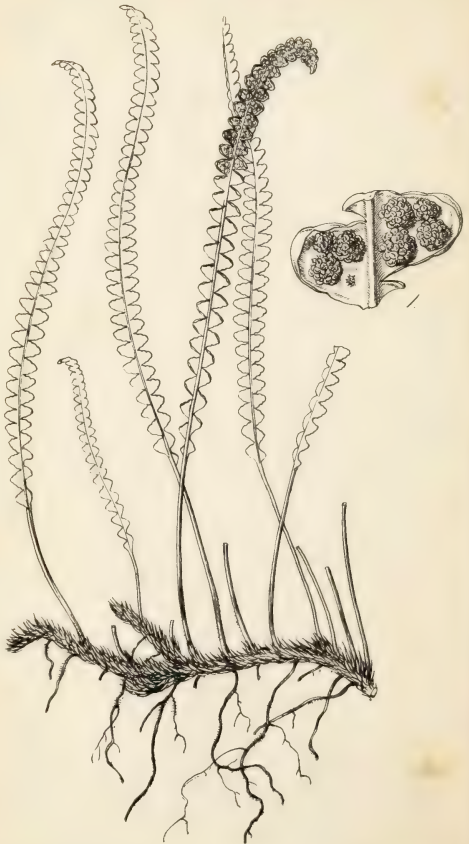
APHELANDRA? CARDUIFOLIA *Hook.*

Ramis teretibus spinosis, foliis alternis (!) oblongo-lanceolatis acutis brevissime petiolatis reticulatis spinuloso-serratis supra nitidis pilosulis subtus pubescentibus venis elevatis, spica terminali foliosa, foliis floralibus reliquis similibus sed minoribus, calyce bibracteato bracteis pilosis lanceolato-subulatis pungentibus utrinque spina solitaria, sepalis bracteis conformibus paulo minoribus espinosis, corolla tubulosa pubescente, labio superiore longiore bifido, inferiore trilobo.

HAB. Andes of Quito. *Prof. W. Jameson*, n. 166.

As far as I can judge from a solitary specimen and no fruit, this is a species of *Aphelandra*, not very distantly allied to our *A. acanthifolia* (TAB. CXIII.) yet differing from that and indeed from all described *Acanthaceæ* in having alternate leaves. Future and more perfect specimens may lead to its being referred to some other genus and order; in the meantime I am anxious it should have a place in this work. The spinous character of the stem appears owing to the decurrent teeth or spinous wings of the leaf, extending a little below the base, and remaining after the leaves have fallen away.

Fig. 1. Flower. *f. 2.* Calyx and bracteas. *f. 3.* Pistil:—*magnified.*



TAB. DCCXIX.

POLYPODIUM SUBCRENATUM. *Hook.*

Caudice repente crassiusculo dense squamoso radicante, frondibus erectis coriaceis petiolatis (petiolo breviusculo glabro) linearibus acuminatis profunde fere ad rachin pinnatifidis glabris subtus fuscescenti-glaucis, laciniis ovatis patentibus obtusis crenatis marginibus revolutis, soris singula lacinia subquaternis.

HAB. Andes of Quito. *Prof. W. Jameson, n. 215.*

A small but well-marked species (allied to *P. rigescens*, Bory ; Hook. et Grev. Ic. Fil. t. 216), with a long, creeping, branched caudex, moderately stout, clothed with brown, lanceolato-subulate scales, sending out from beneath copious branching fibrous roots, and from the upper surface several upright, linear, acuminate, erect, coriaceous, petiolated, deeply pinnatifid fronds, opaque on the surface on both sides ; in a dry state, almost brown black on the upper side ; beneath, of a brownish glaucous colour. Segments patent, ovate, obtuse, veinless, convex above, concave beneath, the margin more or less distinctly crenate and recurved, each bearing about four sori, which occupy nearly the whole disc. Stipes scarcely half the length of the frond, quite smooth and glabrous.

Fig. 1. Fertile segment of a frond :—*magnified.*





TAB. DCCXX.

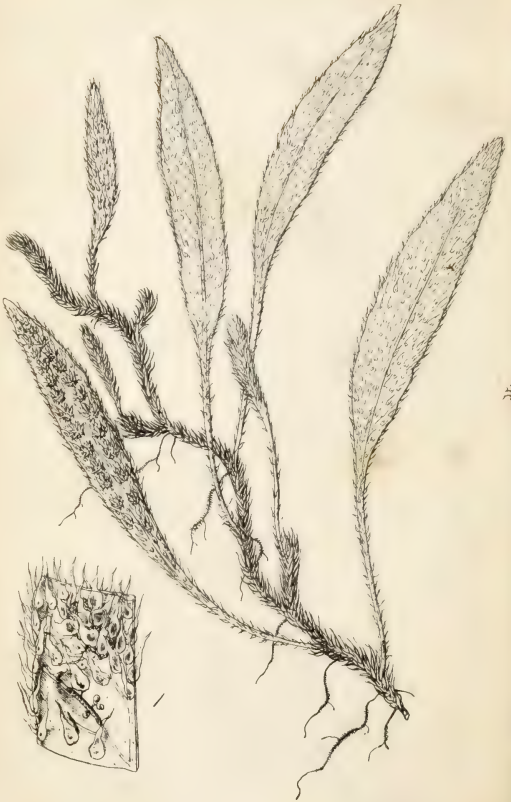
POLYPODIUM (MARGINARIA) PUNCTULATUM. *Hook.*

Caudice repente crasso dense fusco-squamoso squamis lanceolato-subulatis, fronde stipitata oblongo-ovata caudatim acuminata coriaceo-membranacea glabra profunde fere ad rachin pinnatifida, laciniis horizontaliter patentibus lineari-lanceolatis obtusis marginatis integerrimis supra punctatis nudis subtus in costis parce paleaceis, soris prope costam utrinque uniseriatis in singula areola solitariis, stipite frondem æquante compresso hinc plano nudo.

HAB. Andes of Quito. *Prof. W. Jameson, n. 127.*

This belongs to that group of the genus *Polypodium* called *Marginaria* by Presl, and by Bory, who established the genus, as it would appear, upon the *Polyp. incanum* of Linnæus, but without taking the venation into account, which in that particular species is most difficult of detection. Its essential character is to have the sorus at the end of a veinlet, situated within a large 6-sided areola near the costa, formed by a union of the veins, as shown in our figure. This structure is best seen in the present instance by holding the specimen between the eye and the light, when the veins are quite pellucid. Whether this structure of the veins be considered of generic avail or not, it is a valuable aid in the grouping and distinguishing species; for this difference of venation is not always accompanied with difference in habit: many resemble the present species which belong to true *Polypodium*. Mr. J. Smith unites *Marginaria* with *Goniophlebium*. I have derived the name of the present species from the pale dots on the upper surface, which correspond with the receptacles of the sori beneath.

Fig. 1. Portion of a segment with sori:—*magnified.*



TAB. DCCXXI.

POLYPODIUM CHRYSOLEPIS. Hook.

Caudice longe repente squamoso, frondibus subcoriaceis simplicibus uniformibus lanceolatis petiolatis obtusis integerrimis subtus pallidis utrinque squamis peltatis longe acuminatis aureo-nitentibus vestitis, soris intra marginem et costam uniserialibus, venis furcatis obscuris, stipite squamoso, venula superiore sorifero.

HAB. Andes of Quito, creeping among mosses. Prof. W. Jameson, n. 73.

Caudex longe repens, radicosus, ramosus, squamis subulatis longis aureo-fuscis imbricatis tectus; radicibus fibrosis tomentosis. *Stipites* 2-2½ uncias longi, erecti, sparsi, squamosi, squamis ovatis acuminatis peltatis. *Fronde*s subcoriaceæ, simplices, uniformes, 3-4 uncias longæ, lanceolatæ, obtusæ, integerrimæ, obscure venosæ (venis furcatis) virides subtus pallidæ, utrinque squamis copiosis, aureo-nitentibus (junioribus præcipue), ovatis, tenui-acuminatis, peltatis vestitæ. *Sori* subrotundi, uniserialim dispositi inter costam et marginem in dorso venulæ superioris siti. *Capsulæ* dense squamis immixtæ.

This is one of the handsomest among the simple-fronded *Polypodia*, and quite unlike any with which I am acquainted, not only in the caudex and stipes, but also in the upper and under-side of the fronds, which when in perfection are clothed with copious, imbricated, golden-coloured, glossy, peltate scales, in age, however, becoming paler.

Fig. 1. Fertile portion of a frond :—*magnified*; most of the capsules from one sorus being removed to show its insertion.



TAB. DCCXXII.

BORONIA RHOMBOIDEA. Hook.

Glabra, foliis sessilibus coriaceis rhombeo-orbicularibus inferne cuneatis integerrimis coriaceis punctatis rufo-marginatis enerviis, floribus brevissime petiolatis axillaribus terminalibusque solitariis folio vix longioribus, filamentis omnibus glandulosis exappendiculatis, stigmatе trilobo.

HAB. Side of the Western Mountains, Tasmania. *Ronald Gunn, Esq.*

Apparently a low shrub, in habit a good deal resembling the *Boronia crenulata* (Bot. Mag. t. 3915), though very different in the foliage, and still more so in the flowers, which however are in both of a deep rose-colour, but here the stamens (which appear to be all antheriferous), instead of being clothed with copious, long, slender hairs, are beset with large sessile glands. The stigma, too, which in *B. crenulata* comes to a mere point, is here 3-lobed. In both, the ovary is situated upon a large, fleshy disc.

Fig. 1. Leaf. *f. 2.* Flower. *f. 3.* Flower from which the petals are removed. *f. 4.* Pistil and hypogynous disc:—*magnified.*





TAB. DCCXXIII.

LYCIUM QUITENSE. *Hook.*

Fruticosum glabrum, foliis ellipticis obovatisve obtusis subcoriaceis integerrimis, pedunculis axillaribus aggregatis unifloris, floribus nutantibus, calyce bipartito, corolla campanulato-infundibuliformi limbo patente 5-lobo, dentibus (siccitare) fere obsoletis, staminibus inclusis.

HAB. Andes of Quito. *Prof. W. Jameson, n. 200.*

Of this I possess only a solitary specimen from my excellent friend Dr. Jameson; it is unquestionably a congener with the *Lycium fuchsioides*, H. B. K., lately figured in the Botanical Mag. t. 4149. For the present I retain the name of *Lycium*, but we may soon expect a valuable memoir on this and allied genera of *Solanææ* by Mr. Miers, illustrated with excellent figures, when the present species and its allies will be found to constitute a new genus according to that gentleman, and assuredly a very natural one. The individual here represented has foliage much resembling the *L. fuchsioides*, but more rigid and somewhat coriaceous. The flowers are considerably different from that species. The calyx is small, cut almost to the base into two nearly equal, broadly oval, concave lips, obscurely two- or three-toothed at the apex. The corolla is short, infundibuliform, approaching to campanulate, the limb spreading, of five ovate lobes, with teeth between, but small, and in the dried state easily overlooked, or then with difficulty seen at all. The lower half of the tube within is hairy. The filaments of the stamens included. Anthers oblong. Ovary elliptic, obtuse. Style as long as the stamens. Stigma bifid.

Fig. 1. Calyx and pistil. *f. 2.* Ovary and base of the style. *f. 3.* Single stamen, and portion of the base of the corolla:—*magnified.*





TAB. DCCXXIV.

Phebalium grandiflorum. Hook.

Totum pubescenti-stellatum, foliis oblongis subundulatis obtusis, umbellis subtrifloris, calyce minuto, staminibus 20 et ultra, ovario superne trilobo stellato-pubescente, stylo filiformi, stigmatibus 3-lobis.

HAB. Swan River, West Australia. *Mr. James Drummond, 1st Coll. n. 12.*

This is considerably different from any hitherto described *Phebalium*, and departs from the normal structure of that genus in having a considerable number of stamens, only three ovaries combined for two-thirds of the way from the base, and large flowers. The calyx is peculiarly minute and indistinct. The petals are oblong or obovate, clothed at the back, as is most of the surface of the plant, with stellated and pedicellate tufts of hairs.

Fig. 1. Flower. *f. 2.* The same more expanded. *f. 3.* Stamen. *f. 4.* Ovary. *f. 5.* Transverse section of the same. *f. 6.* Portion of a leaf, showing the nature of the pubescence:—all more or less *magnified*.





TAB. DCCXXV.

VILLARSIA INVOLUCRATA. Hook.

Erecta ramosa, caule folioso, foliis cordato-rotundatis obtusis sublonge petiolatis, petiolis basi vaginantibus, pedunculis axillaribus terminalibusque monocephalis, capitulis involu-cratis bracteatisque, involucri foliolis 2 ovatis acutis concavis, floribus sessilibus, calycis 5-lobi tubo piloso ovario semi-adnato laciniis ovato-acuminatis, corollæ infundibuliformi-rotatæ intus pilosæ laciniis ovatis acutis.

HAB. Swan River, Western Australia. *James Drummond*, n. 7, 1845.

This is probably a native of marshy ground, and, at first sight, has more the habit of *Ranunculus* than of any Gentianeous plant. It seems, however, to be a true *Villarsia*; though a species very unlike any that has been hitherto described, and remarkable for its flowers being sessile, and collected into rounded, bracteated, and involucreated, pedunculated heads or capitula. The leaves, rather long and on petioles sheathing at the base, are nearly orbicular, approaching to cordate. Each flower is rather small, apparently yellow; the calyx has a pilose or villose tube, of which the lower half is adnate with the ovary; the hairs very long; limb 5-lobed, the lobes ovato-acuminate, about the length of the corolla. Corolla hairy at the throat. Stamens 5, exserted. Style much longer than the stamens. Stigma bifid.

Fig. 1. Head of flowers and involucre. *f. 2.* Single flower. *f. 3.* Corolla (and base of the calyx-tube) with stamens and pistil. *f. 4.* Pistil. *f. 5.* Section of the ovary:—*magnified.*



TAB. DCCXXVI.

XANTHOSIA CILIATA. Hook.

Subpubescens basi fruticosa, caulibus plurimis ex eadem radice erectis ramosis, foliis linearibus v. lineari-spathulatis acutis integris vel apicem versus 3-dentatis basi articulatis membranaceo-vaginantibus, vaginis longe ciliatis, pedunculis axillaribus simplicibus v. divisis bracteatis, umbellis nutantibus, involucri involucellique foliolis tripartitis, dentibus calycinis cordatis acuminatis petala superantibus deciduis, mericarpiis 5-jugis.

HAB. Swan River, Western Australia. *James Drummond*, n. 237, (1843).

Radix subfusiformis, descendens, perennis, ramosa; ad collum multiceps. *Caules* digitales et ultra, vix spithamæi, erecti, ramosi, rigidi, inferne fruticosi nudi, superne foliosi. *Folia* vix unciam longa, linearia, erecto-patentia, subspathulata, integerrima, uninervia v. apicem versus tridentata, marginibus paululum reflexa, subincrassata, basi attenuata, sessilia, articulata et membrana longe ciliata vaginantia. *Pedunculi* axillares, simplices vel furcati, solitarii, folium æquante, bracteati, bracteis parvis linearibus integris. *Umbellæ* subglobosæ, 3-6-8-floræ. *Involucra involucellaque* unilateralia, ut videtur semper solitaria, tripartita v. subtriphylla, basi pedicellis ciliatis. *Fructus* subrotundo-ovatus, cordatus, compressus. *Mericarpiæ* jugis 5 elevatis, æquidistantibus, lævibus. *Calycis lobi* 5, cordato-acuminati, petaloidei, petalis longiores, vix peltati, demum decidui. *Petala* induplicata. *Stylopodia* majuscula. *Styli* erecti, subulati.

A very remarkable plant, and evidently I think referable to the same genus with our *X. dissecta* (*Leucolæna*, Br.) from Tasmania (TAB. CCCII.), but extremely different in the foliage, and in the shape of the calycine teeth or segments.

Fig. 1. Leaf. *f. 2.* Flower and involucral leaf. *f. 3.* Flower. *f. 4.* Calycine lobe. *f. 5.* Petal. *f. 6.* Section of fruit. *f. 7.* Upper portion of ditto :—*magnified*.





TAB. DCCXXVII.

PHEBALIUM SQUAMULIGERUM. Hook.

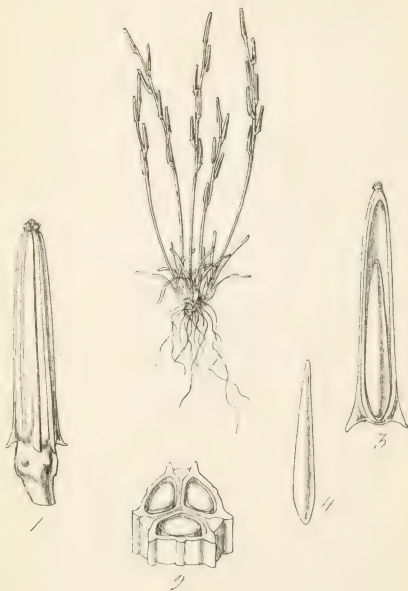
Ramis ovariisque (præcipue) squamulosis, squamis peltatis radiatim spinulosis appressis, foliis anguste oblongis obtusis, umbellis plurifloris, staminibus sub-10, ovario profunde trilobo, stylo superne latiore, stigmate magno trilobo.

HAB. Collected between Swan River and King George's Sound.

Mr. James Drummond.

The present plant is unquestionably of the same genus of *Rutaceæ* with that figured at TAB. DCCXXIV. It differs, however, remarkably in its clothing. The leaves indeed, except the young ones, are naked; but the branches and ovaries, and all the other parts of the plant which in our *P. stelligerum* are covered with stellated and stipitate pubescence, are here beset with little, sessile, peltate scales of a beautiful structure when seen under a microscope, or they may be considered as rigid radiating hairs, united by a scale-like membrane forming the disc of the scale. There are besides other differences. The flowers are more numerous in the umbel, and much smaller; the petals are more acute; the anthers have a more decided connectivum; the ovaries are freer; the style is shorter and thicker upwards; and the lobes of the stigma are much larger.

Fig. 1, 2. Flowers. f. 3. Stamen. f. 4. Pistil. f. 5. Transverse section of an ovary. f. 6. Front, and—f. 7. side view of a ciliated scale:—all more or less magnified.



TAB. DCCXXVIII.

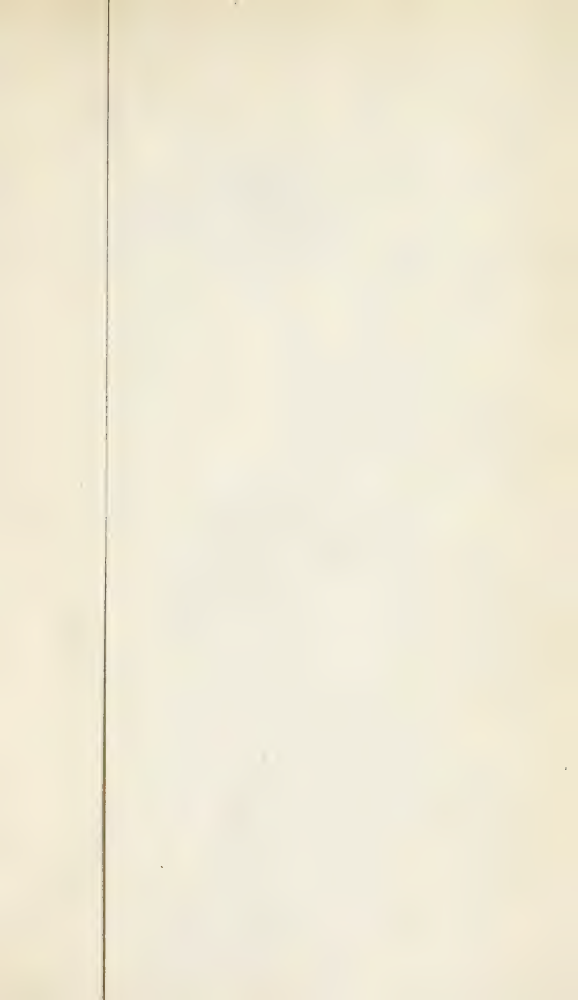
TRIGLOCHIN CENTROCARPUM. Hook.

Annuum, radice fibrosa, foliis radicalibus parvis lineari-setaceis obtusis basi dilatato-membranaceis, scapis folio multo longioribus, floribus spicatis, fructibus lineari-pyramidatis 3-locularibus (loculis 3 alternis abortientibus), loculis (seu carpellis) trigonis dorso carinatis, angulis 2 alatis alis basi calcaratis, stigmatibus tribus globosis sessilibus villosio-velutinis.

HAB. Swan River, Western Australia. *Mr. James Drummond*, n. 5, 1845.

We have here a new and very pretty species of *Triglochin*, from Mr. Drummond's last collection of Swan River plants. It is small, but quite distinct from any yet described. The small plants seem to grow in a tufted or cæspitose manner. Leaves $\frac{1}{2}$ to $\frac{3}{4}$ of an inch long, narrow-linear, approaching to setaceous, obtuse, the base singularly dilated, concave and sheathing. Scapes 2-3 inches high, slender, the upper half occupied by the spike of from 5-7 flowers. Our specimens are with immature fruits, so that the perianths are unknown to us; the scars whence the sepals have fallen, only, remaining upon a thickened, fleshy, elongated receptacle, on which rests the elongated linear-pyramidal, 3-celled capsule, crowned with three globular, velvety stigmata. Each perfect cell (or carpel) alternates with an abortive one, and is trigonal, the dorsal surface plane, with a slightly elevated, central line or carina, and on each side a prominent edge or wing, which at the base is prolonged into a short but prominent spur: hence the base of the fruit presents six of these spurs.

Fig. 1. Capsule. *f. 2.* Transverse section of the fruit, showing the three perfect cells or carpels and the three alternating abortive ones. *f. 3.* Vertical section of a cell or carpel. *f. 4.* Immature seed:—*magnified*.





TABS. DCCXXIX, DCCXXX.

RUBUS PULCHERRIMUS. *Hook.*

Fruticosus, totus appresso-pubescenti-sericeus, caule terete, foliis longe petiolatis amplis quinato-palmatis, foliolis sessilibus lato-lanceolatis acuminatis ciliato-serratis parallelim nervosis, stipulis lato-subulatis acuminatis membranaceis, pedunculis axillaribus brevissimis pedicellisque bracteatis, floribus compactis cymoso-paniculatis, calycis lobis acuminatissimis, petalis nanis obovato-subrotundis.

HAB. Java. *Thomas Lobb.*

There would be some pleasure in studying the *Rubi* of our country, if any of the species were only half as beautiful as the present, and but a twentieth part as distinct. Besides the elegant form of the leaves, their copious serratures, and the close parallel venation, they are clothed on both sides, as is the whole plant, with a compact, appressed silky down. I find no species described that at all agrees with this plant.

Fig. 1. Flower. f. 2. Petal:—magnified.



TAB. DCCXXXI.

TRIGLOCHIN CALCITRAPA. *Hook.*

Nanum, cæspitosum, annuum, foliis brevibus lineari-setaceis basi membranaceo-dilatatis, capsulis linearibus 3-locularibus basi in spinas longas 6 didymas horizontales productis, loculis dorso rotundatis, sepalis ovatis acuminatis.

HAB. Swan River, Western Australia. *Mr. James Drummond.* n. 17, 1845.

At our TAB. DCCXXVIII, is figured a small annual species of *Triglochin* with winged fruit, and that fruit, at the base, produced into six short spines. In the present instance, besides a different shape of fruit (the cells being destitute of wings and rounded at the back), the base is prolonged into six very long horizontal spines, placed in pairs, giving the fruit a miniature resemblance to that instrument of war, the Caltrops, whence is derived the specific name.

Fig. 1. Flower. *f. 2.* Immature fruit or ovary. *f. 3.* Fruit. *f. 4.* Vertical section of the same. *f. 5.* Transverse section of the ovary :—*magnified.*



TAB. DCCXXXII.

MECONOPSIS HETEROPHYLLA. *Benth.*

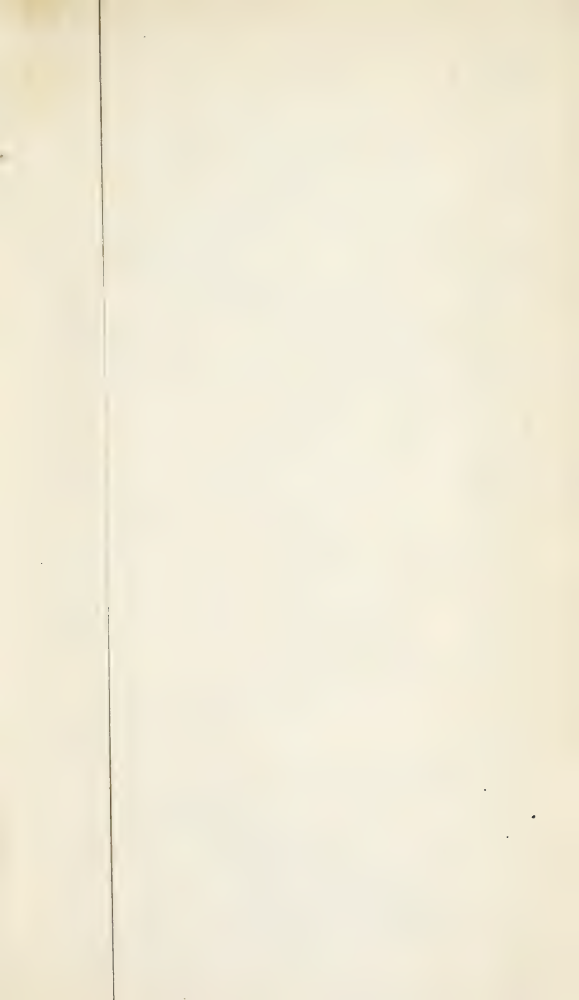
Glabra, caule folioso, foliis pinnatifidis inferioribus longe petiolatis, radicalium segmentis ovatis integris rarius hic illic fassis, caulinarum oblongis pinnatifidis, supremorum sessilibus linearibus plerumque integris, pedunculis gracilibus elongatis unifloris, floribus parvis, stylo subelongato, stigmate capitato-quadrilobo, capsula obovato-turbinata 4-angulata, valvis 4 intra angulos reflexis.

Meconopsis glabra. Benth. in Hort. Trans. 2nd Ser. v. 1, p. 40. Torr. and Gray, Fl. N. Am. 1, p. 61.

HAB. California. *Douglas, Nuttall, Coulter.*

A small Californian Papaveraceous plant, with the lower leaves on long petioles; the radical ones are pinnatifid, or almost pinnate, with oval or obovate, entire, or rarely slightly cleft pinnæ; the intermediate stem-leaves are bipinnatifid, their segments linear-oblong; the uppermost, which moreover are sessile, are simply pinnatifid with linear segments, rarely and only the lowest ones again pinnatifid. Peduncles generally terminal, long, slender, the apex drooping while in bud, and then bearing two oval sepals, afterwards the flower becomes erect, and the sepals are caducous. The flower is small; petals red. Stamens about 12. Germen between obovate and turbinate, with four prominent, longitudinal angles, a conspicuous style, and a four-lobed, capitate stigma. The fruit scarcely differs in shape from the germen, except in being longer. It opens by four valves beneath the persistent style, and between the four angles which internally tally with the placentæ.

TAB. DCCXXXII. Upper right-hand figure, a capsule; *nat. size.* Fig. 1. Flower. f. 2. Pistil. f. 3. Ripe capsule:—*magnified.*





TABS. DCCXXXIII, DCCXXXIV.

AGALMYLA STAMINEA. Bl.

GEN. CHAR. AGALMYLA, Br. *Agalmylæ* sp. Bl.—*Calyx* 5-partitus acutus. *Corolla* tubulosa bilabiata. *Stamina* antherifera 2, antheris exsertis, loculis parallelis. *Stigma* bilamellatum (lamellis æqualibus). *Capsula* elongata, valvis strictis. *Semina* pendula, apice nuclei affixa, utrinque monotricha.—Herba *radicans*, foliis *alternis dentatis*. Br.

Agalmyla staminea. Bl. *Bijdr.* 767; Br. in *Horsf. Jav.* p. 116; *De Cand. Prodr.* 9, p. 263.

Justicia parasitica. Lam. *Ill.* 1, p. 42 (not Vahl).

Cyrtandra staminea. Vahl, *Enum.* 1, p. 105.

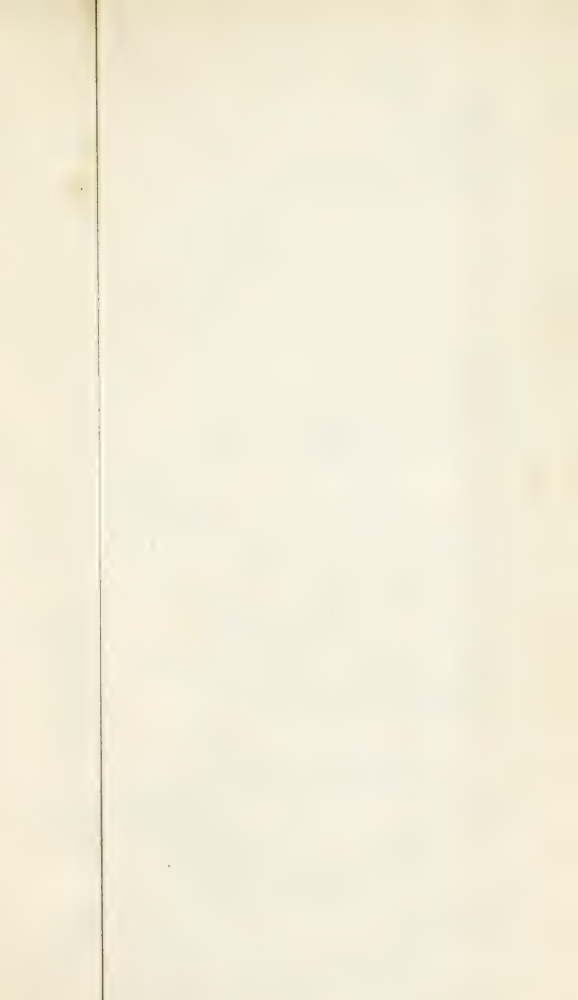
HAB. Java. Blume, Thomas Lobb.

A singular and very beautiful creeping epidendrous plant, with large, petiolated, alternate leaves, and rich clusters of large scarlet flowers, each with two singularly exserted stamens, the linear oblong anthers having a horizontal direction, and they are connected by their apices. The fruit I have not seen, but the ovary I find to arise from a 5-toothed, cup-shaped gland or disc; and within the corolla, a little above the base of the tube, is a circle of jointed subulate hairs, with a small globose gland at the tip.

The genus is well-named by Blume, from *αγαλμα*, an ornament, and *ῥόδον*, a wood or grove, from its being so great an ornament to the woods in which it grows. The distinguished author just mentioned, intended it to include a second species, *A. asperifolia*, Bl., with opposite leaves and didynamous flowers; but this Mr. Brown separates from *Agalmyla*, and consequently modifies Blume's character, as given above.

Fig. 1. Corolla laid open. *f.* 2. Hairs from within the corolla. *f.* 3. Pistil and hypogynous disc or cup:—more or less *magnified*.







TABS. DCCXXXV, DCCXXXVI.

CYRTANDRA PENDULA. *Bl.*

Caule herbaceo inferne repente procumbente, foliis oppositis longe petiolatis elliptico-oblongis acuminatis serratis supra lævibus in venas infra villosiusculis, capitulis involucri 1-phyllo inclusis longissime pedunculatis pendulis, calyce 5-fido latere fisso. *DC.*

Cyrtandra pendula. “*Bl. Bijdr.* 763.” *De Cand. Prodr.* 9, p. 281.

HAB. Moist mountains of Java. *Blume, Thomas Lobb.*

I feel a little doubtful whether this be the true *C. pendula* of Blume; for the cordate base of the leaves is not noticed, and the peduncles are described as “longissimi.” In the circumstance first mentioned, and the shorter peduncles, our plant agrees better with the *C. bicolor*, Jack, a plant of Sumatra; and it is said of *C. pendula*, “Affinis *C. bicolori* :” so that probably the two are but varieties of one and the same species. The colour of the flowers of *C. pendula* is stated to be, “sordide albus in fundo corollæ punctis purpurascentibus.”



A.



B.



TAB. DCCXXXVII.

(A).

PHASCUM CRISTATUM. *Hook. et Wils.*

Subacaule, foliis spathulato-lanceolatis acuminatis inciso-dentatis laciniis dentato-ciliatis nervosis dorso cristatis, capsula immersa subsessili.

HAB. Swan River, West Australia. *James Drummond.*

Planta minima, vix $\frac{1}{10}$ unc. 6-9-phylla, junior filis confervoideis vel pseudo-cotyledonibus stipata. *Folia* erecta, subsecunda, concaviuscula, supra medium dilatata, profunde inciso-dentata, laciniis iterum dentato-ciliata, costa basi pallida evanescente superne validiore dorsoque ciliato-cristata percussa, læte viridia, areolatione laxa. *Vaginula* subrotunda, rufo-fusca. *Pedicellus* brevissimus. *Capsula* (in specimine nostro immaturo) ovato-globosa, acutiuscula. *Calyptra* campanulata, rufo-fusca. *Planta* mascula ad pedem fœminæ, gemmiformis.

Allied to *P. inhærens*, from which it differs in the remarkable structure of its leaves, which are beautifully jagged and ciliated.

(A). *Fig.* 1. Plant; *nat. size.* *f.* 2. Fertile plant. *f.* 3, 4. Leaves. *f.* 5. Ditto, the foliage being removed:—*magnified.*

(B).

PHASCUM EXIGUUM. *Hook et Wils.*

Subacaule, foliis subsecundis subulato-setaceis nervosis integerimis, capsula subexserta nutante.

HAB. Swan River, West Australia. *James Drummond.*

Planta exigua, $\frac{1}{10}$ ad $\frac{1}{5}$ unc. 8-12-phylla. *Folia* basi ovato-lanceolata, nervo in subulam angustam longissimam educto. *Seta* pro more crassa, arcuato-inflexa. *Capsula* subglobosa, apiculata. *Calyptra* conico-campanulata, integra vel latere fissa, rufo-brunnea. *Planta* mascula gemmiformis ad basin fœminæ.

Our specimens are not sufficiently ripe to determine whether this Moss really belongs to the present genus. If rightly referred hither, it differs from *P. flexuosum*, Schwaegr., its nearest ally, in the narrower and longer leaves, stout arcuate seta, globose capsule, and small reddish calyptra. The capsule, in a very young state, is ovate-acuminate, with a remarkably broad, abrupt base, resembling an apophysis.

(B). *Fig.* 1. Plants; *nat. size.* *f.* 2, 3, 4. Plants; *magnified.* *f.* 5, 6. Leaves; more *magnified*: from different parts of the plant.

.4.



B.



TAB. DCCXXXVIII.

(A).

SCHISTIDIUM ARCUATUM. *Hook. et Wils.*

Caule apice arcuato simplici, foliis trifariam imbricatis appressis rhomboideo-ovatis obtusiusculis denticulatis nervo subcontinuo, capsula exserta pendula subglobosa.

HAB. Swan River, West Australia. *James Drummond.*

Plantæ fertiles pusillæ, lineares et ultra; steriles duplo longiores. *Caulis* fertilis basi erectus, apice arcuato-inflexus. *Folia* arcte trifariam imbricata, appressa, carinato-concava, margine minutissime denticulata, nervo valido subcontinuo instructa; perichætalia lanceolato-acuminata, subfalcata. *Vaginula* subcylindrica. *Seta* brevis curvata, superne incrassata. *Capsula* (cum operculo) pyriformi-globosa, obtusiuscula, pendula, medio dehiscens, rufo-brunnea. *Calyptra* conico-mitræformis, membranacea, luteola. *Sporæ* majusculæ.

(A). *Fig. 1.* Plants; *nat. size.* *f. 2, 2.* Ditto; *magnified*: with separate calyptra and sporules. *f. 3—6.* Leaves from different parts of the plant; *more magnified.* *f. 7.* Separate capsule, seta, and vaginula:—*magnified.*

(B).

SCHISTIDIUM PULCHELLUM. *Hook. et Wils.*

Caule ramoso subincurvo, foliis imbricatis julaceis appressis ovatis apiculato-acuminatis integerrimis, nervo subcontinuo, capsula exserta pendula pyriformi, operculo conico-acuminato.

HAB. Swan River, West Australia. *James Drummond.*

Planta *S. arcuato* duplo longior, gracilior, nitida. *Caulis* lenissime curvatus, hic illic ramos erectos filiformes, surculis sterilibus similes, proferens. *Folia* arcte imbricata, nec trifaria, appressa, ovato-rotunda, brevissime acuminata, integerrima; nervo in foliis caulinis subcontinuo in ramulinis abbreviato; perichætalia ovato-lanceolata, longe acuminata. *Vaginula* cylindrica. *Seta* brevissima incurva, superne incrassata. *Capsula* pyriformis, pendula, rufo-brunnea. *Operculum* luteum, capsula duplo brevius. *Calyptra* conico-mitræformis, subcoriacea, lutea.

Similar to *S. arcuatum* in general aspect, but essentially distinguished by the entire, acute leaves, which are not at all trifarious, and by the pyriform capsule and small pointed operculum. The leaves resemble those of *Gymnostomum julaceum*, Hook.

(B). *Fig. 1.* Plant; *nat. size.* *f. 2.* The same; *magnified*: with calyptra separate. *f. 3—7.* Leaves from different parts of the plant; *more highly magnified.* *f. 8.* Capsule, seta, and vaginula:—*ditto.*

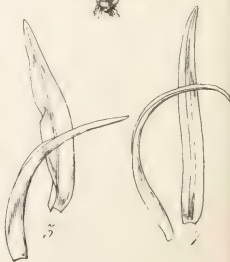
A.



B.



C.



TAB. DCCXXXIX.

(A).

WEISSIA PALLENS. *Hook. et Wils.*

Foliis suberectis lineari-lanceolatis integerrimis evanidinerviis, capsula suberecta pyriformi, operculo conico-rostellato.

HAB. Swan River, West Australia. *James Drummond.*

Caules cæspitosi, subramosi, 2-3 lineas. *Folia* laxè reticulata, siccitate vix tortilia, luteola. *Seta* 2-linearis, pallide rubella. *Capsula* pyriformis, siccitate subcylindrica, sub orem paululum constricta, badia. *Peristomii* dentes 16, pyramidati, rubri. *Operculum* breve, basi conicum oblique rostellatum.

(A). *Fig.* 1. Plant; *nat. size.* *f.* 2. The same; *magnified.* *f.* 3, 4. Leaves; more *magnified.* *f.* 5. Capsule, with operculum, and—*f.* 6. Capsule from which the operculum is removed; *ditto.* *f.* 7. Portion of the peristome, and sporules:—highly *magnified.*

(B).

ORTHODONTIUM SULCATUM. *Hook. et Wils.*

Foliis patenti-recurvis lineari-lanceolatis subplanis integerrimis evanidinerviis, capsula inclinata elliptico-oblonga brevicolla siccitate sulcata, operculo conico-rostellato.

HAB. Swan River, West Australia. *James Drummond.*

Caules cæspitosi, 2-lineares. *Folia* patentia, recurva, siccitate vix mutata, nervo subcontinuo, nitida, flavescenti-viridia. *Seta* semiuncialis, e luteo rufescens, nitida. *Capsula* brevicolla, elliptico-oblonga, basi attenuata, siccitate evidenter sulcata, rufo-brunnea. *Peristomii* externi dentes 16, oblongi, trabeculati, ferruginei: interni membrana basilaris brevis, processus 16 lanceolati peristomio externo paulo longiores, concolores. *Operculum* conico-brevirostre, rostro obliquo, capsula sextuplo brevius. *Sporæ* minimæ, rutilantes.

Allied to *O. lineare*, Schwaegr.; but differing essentially from that and the other species, in the furrowed capsule. The leaves also are shorter and not gradually tapering.

(B). *Fig.* 1. Plant; *nat. size.* *f.* 2. the same; *magnified.* *f.* 3, 4. Leaves; more *magnified.* *f.* 5. Vaginula; *ditto.* *f.* 6. Capsule, with operculum; *ditto.* *f.* 7. Portion of the peristome:—highly *magnified.*

(C).

FABRONIA TOMENTOSA. *Hook et Wils.*

Foliis ovato-lanceolatis longe piliformi-acuminatis ciliatis, capsula subglobosa, operculo planiusculo.

HAB. Swan River, West Australia. *James Drummond.*

Caulis pusillus, vage ramosus. *Folia* erecto-patentia, confertim imbricata, subpilifera, pilis longis pulcherrime ciliata, basi nervo brevi obsoleto instructa; perichætialia elliptico-oblonga, apice inciso-serrata. *Calyptra* albida, dimidiata.

This beautiful species differs from all others in the very long filiform processes at the margin of its leaf, in which it most resembles *F. Persoonii*, but that has the leaves much narrower than in our Moss.

(C). *Fig.* 1. Plant; *nat. size.* *f.* 2. Leaf; *magnified.* *f.* 3. Perichætial leaves; *ditto.* *f.* 4, 5. Capsules with and without an operculum; *ditto.*



TAB. DCCXL.

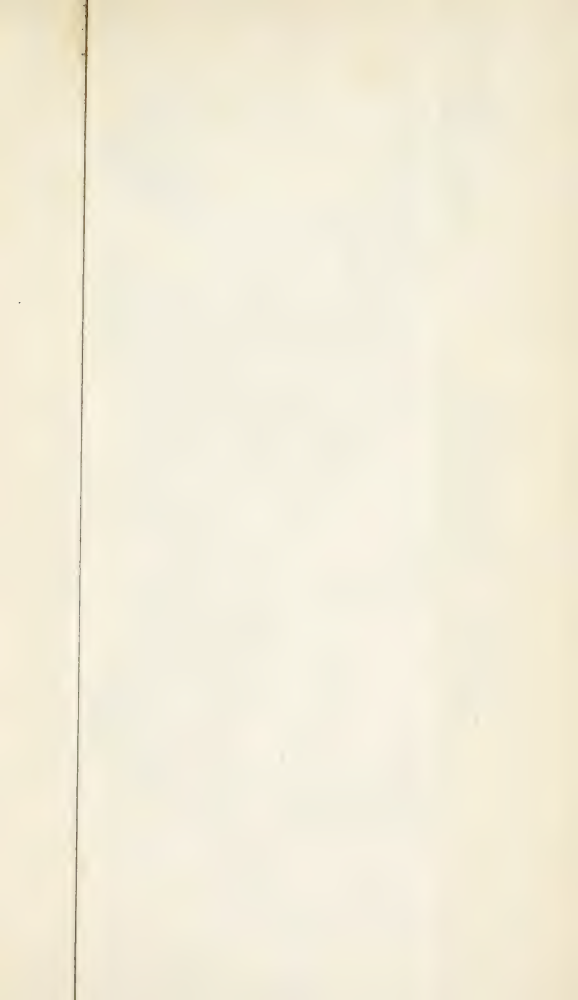
VACCINIUM JAVANICUM. *Hook.*

Glabrum, ramis angulatis fuscis nitidis, foliis remotis coriaceis sempervirentibus obovato-lanceolatis acutis integerrimis oblique venosis marginibus tenui-recurvatis basi in petiolum perbrevem attenuatis, racemis ebracteatis solitariis axillari-bus folio brevioribus, pedicellis flore brevioribus, dentibus calycinis brevissimis, corolla elliptica ore 5-fido, staminum filamentis lato-subulatis hirsutis, antherarum loculis muticis apice longe tubulosis apice inæqualiter subtrifidis, stylo in-cluso.

HAB. Mount Salak, Java. *Thomas Lobb.*

An inhabitant of mountain regions in Java; and, as far as I can discover, a hitherto undescribed species. The leaves are coriaceous, glossy above, opaque beneath; the margin with a slightly reflexed edge. Racemes shorter than the leaves, with from 10-12 drooping flowers. Pedicels short. Ovary inferior, small, hemispherical, crowned by very indistinct calycine teeth. Corolla almost exactly elliptical; the mouth with five, small, spreading segments or teeth. Stamens and thick style included. Filaments broadly subulate, clothed, especially on the anterior side, with long, copious hairs. Anther-cells without awns, terminating upwards in a long tube, with about three unequal teeth at the mouth.

Fig. 1. Flower. f. 2. Calyx and pistil. f. 3. Stamen:—magnified.





TABS. DCCXLI, DCCXLII.

RUBUS LOBBIANUS. *Hook.*

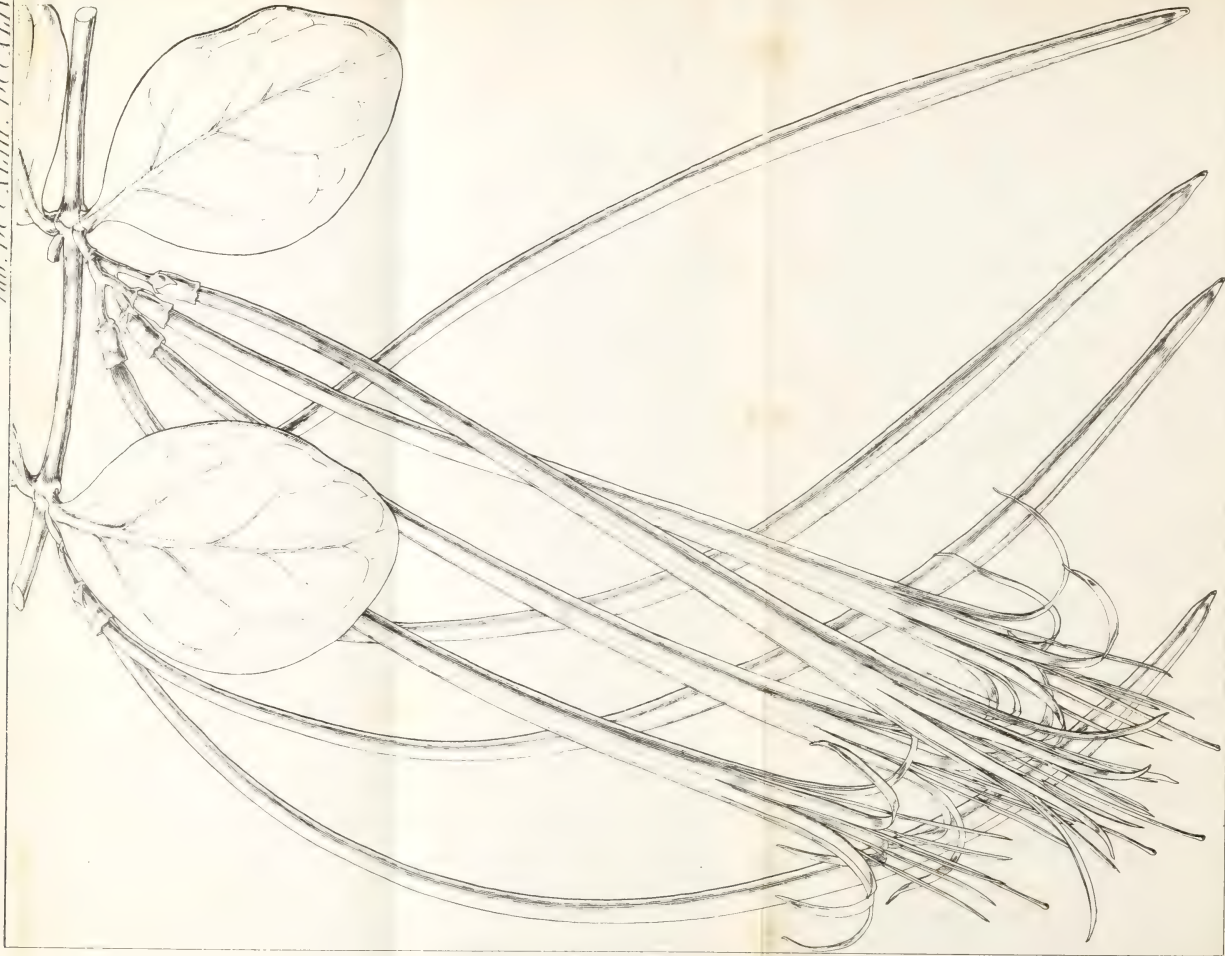
Scandens fruticosus, ramis subteretibus petiolis pedunculisque pubescentibus aculeolatis aculeolis deflexis, foliis ovato-cordatis brevi-acuminatis subsinuatis dentatis basi profunde bilobis supra glabris canescenti-albis reticulatim venosis, paniculis axillaribus folio brevioribus seu terminalibus elongatis compositis bracteatis, bracteis oblongis fimbriatofissis, floribus (parvis), calycis lobis ovatis acutis pubescentibus, petalis calyce duplo longioribus obovatis concavis apice bilobis, filamentis dilatatis, stylis elongatis numerosissimis.

HAB. Java. *Thomas Lobb.*

There are several species of *Rubus* from the Malay Islands; but not one that agrees with the present, a native of Java, which I have consequently named in compliment to its discoverer, Mr. Thomas Lobb, one of the collectors sent out by Mr. Veitch of the Exeter Nursery. It belongs to the same group with *R. Moluccanus*, L., *R. elongatus*, Sm., &c., which are peculiar to the Indian archipelago.

Fig. 1. Flower. *f. 2.* Section of the calyx with pistils. *f. 3.* Petal. *f. 4.* Stamen:—*magnified.*





TABS. DCCXLIII, DCCXLIV.

LORANTHUS MACRANTHUS. *Hook.*

Hexamerus, caule tereti, foliis brevissime petiolatis orbiculari-ovalibus coriaceis, pedunculis bisdichotomis axillaribus, calyce unibracteato, bractea ovata calyce brevior, corollis omnium longissimis (pedalibus !), petalis anguste linearibus apice attenuatis liberis reflexis, staminibus petala subæquantibus stylo brevioribus, antheris lineari-angustissimis basi fissis.

HAB. Andes of Quito. *Prof. W. Jameson, n. 244.*

On first inspection of this plant, I was led to refer it to *L. grandiflorus*, R. and P., Fl. Peruv. 3, p. 45, t. 263; but that has only five petals, which are dilated towards the apex; a bractea longer than the ovary, much shorter flowers; but, above all, anthers of quite a different character, short, oblong, fixed to the filament by the middle of the back: whereas, in our plant, the anthers are very long, slender, tapering, and fixed by their base to the filament. The corolla is of an extraordinary length (12 inches), and appears still more remarkable in bud before the petals have separated, which they do only at the extremity, the rest of the corolla forming almost a cylindrical tube. Still nearer to our plant, in some respects, is the *L. dichotomus*, R. and P. (l. c. p. 45, t. 274); but that has larger leaves, corollas not half so long, shorter and broader anthers, and not "basifixæ."





TAB. DCCXLV.

RANUNCULUS PERUVIANUS. *Pers.*

Radice descendente subfibrosa, foliis radicalibus longe petiolatis subpilosis orbiculari-reniformibus crenatis, caulinis sessilibus in lobos lineares integros partitis, calyce appresso-villosissimo.

Ranunculus Peruvianus. *Pers. Syn. Pl.* 2, p. 103. *H. B. K. Nov. Gen. et Sp. Am.* 5, p. 44. *Deless. Ic. Select.* 1, p. 37. *De Cand. Prodr.* 1, p. 34.

HAB. Peru, and in moist places on Antisana; *Humboldt.* Andes of Quito; *Prof. W. Jameson, n. 1.*

I have not seen the fruit of this pretty *Ranunculus*. De Candolle says of it, "Carpella ovato-compressa, minima, lævia." Delessert's figure, which represents a much finer plant than that here given, exhibits the carpels as rather large than otherwise. The petals are five, subrotund; and the very hairy calyx is appressed to the corolla.

A.



B.



TAB. DCCXLVI.

(A).

HOOKERIA FISSIDENTOIDES. Hook. et Wils.

Caule pinnatim ramoso, ramis complanatis rigidiusculis, foliis subdistichis lanceolato-ligulatis acutis binerviis apice subserratis, seta lævi, capsula ovato-cernua, operculo rostrato, calyptra glabra.

HAB. Woods, interior of Manchester, Jamaica, Dec. 1843. *W. Purdie.*

Caulis 1-2 uncialis, depressus, pinnatim ramosus, ramis complanatis; ramulis brevibus pinnæformibus, siccitate rigidis. *Folia* conferta rigidula, nitentia, læte viridia siccitate stricta, lateralia erecto-patentia, cætera appressa, basi ovata concava superne ligulata plana acuta vel brevissime acuminata, fere ad apicem binervia, areolis oblongis, minimis; *perichætalia* e basi ovata ligulata acuta serrata binervia. *Seta* semiuncialis, rufo-brunnea. *Operculum* capsulam subæquans, longirostrum. *Calyptra* albida, basi multifida.

Allied perhaps to *H. nitens*, Hornsch. in Fl. Bras; but that has the leaves recurved at the apex, and strongly serrate. It exhibits a striking resemblance to some species of *Fissidens*.

TAB. DCCXLVI. (A). Plants; *nat. size.* Fig. 1. Leaves. *f.* 2, 3. Perichætium and leaves. *f.* 4. Capsule, with calyptra. *f.* 5. Capsule, with operculum:—*magnified.*

Cumingiana.

N. O. Musci.

(B).

MACROMITRION BRACHIATUM. Hook. et Wils.

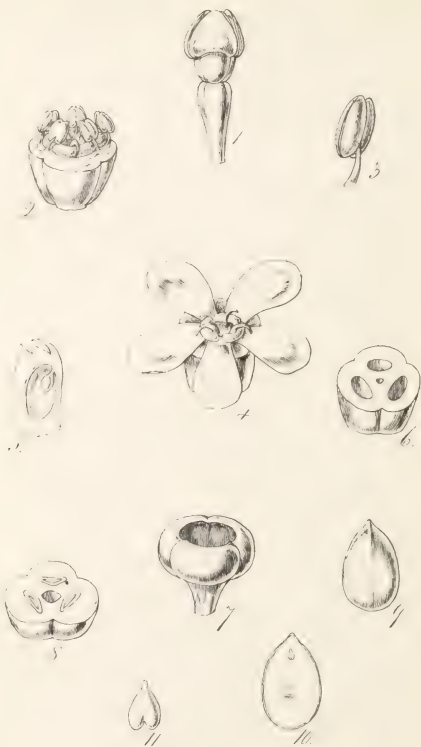
Caule repente, ramis sterilibus brevibus fertilibus elongatis, ramorum sterilium foliis patule incurvis lanceolato-oblongis obtusis mucronatis, fertilium patentibus ovato-oblongis acutis, capsula immersa erecta oblonga gymnostoma, operculo conico-rostellato, calyptra conico-mitræformi pilosissima.

HAB. Philippine Islands, on the bark of trees. *Cuming, n.* 2195.

Caulis 3-4 uncialis. *Rami* steriles $1\frac{1}{2}$ lin. longi; fertiles unciales erecti, apice innovando ramulosi. *Folia* ramorum sterilium multifaria, confertissima, ligulata, carinata, integerrima, obtusa, nervo valido rubello in mucronem brevem exeunte, siccitate contorta, saturate viridia subopaca, areolis rotundis minimis: fertilium breviora dissita, quinquefaria, patentia, substricta, siccitate incurvo-appressa, nervosa; *perichætalia* elliptica, vaginantia, apice ciliato-denticulata. *Capsula* immersa, in vaginulam brevissimam subsessilis, badia. *Operculum* capsulæ tertiam partem metiens conicum, rostello recto. *Calyptra* operculo duplo longior, basi suboctofida, pilis numerosis flexuosis flavis obtecta.

A very remarkable Moss, to which we have seen nothing analogous except *Schlotheimia tecta* (Hook. and Wils.) found in Brazil by Mr. Gardner, which has also an immersed capsule.

(B). Plant: *nat. size.* Fig. 1. Leaf. *f.* 2. Small portion of the plant, with leaves. *f.* 3. Smaller leaf. *f.* 4. Capsule, operculum and calyptra. *f.* 5. Perichætial leaves:—*magnified.*



TAB. DCCXLVII.

ARALIA POLARIS. *Hombr. et Jacquin.*

Polygama herbacea inermis, tota setis mollibus laxis obsita, foliis (maximis) longe petiolatis orbiculari-reniformibus basi profunde cordatis marginibus multilobatis, lobis 3-5-dentatis dentibus subacutis, umbellis copiosis compositis partialibus multiradiatis globosis, involucris foliaceis, floribus densis, fructibus depresso-sphæricis exsuccis suberosis atris nitidis.

Hook. fil. Bot. Antarct. Voy. v. 1, p. 19.

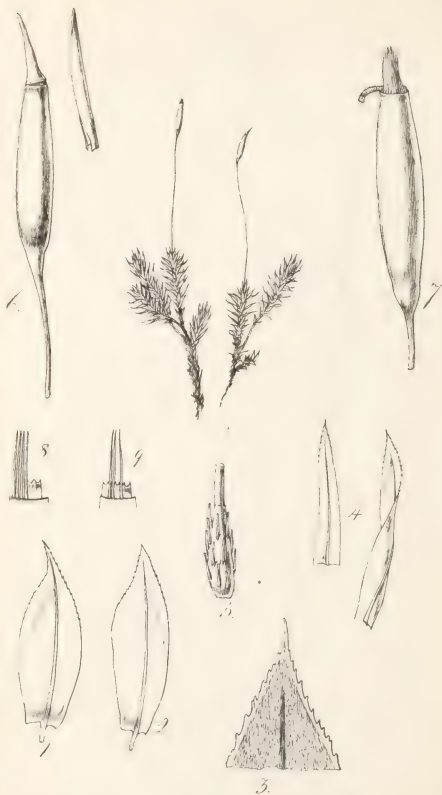
Aralia polaris. Hombr. et Jacq. in Voy. au Pole Sud, Bot., Phaner. t. 2 (plate only).

HAB. Lord Auckland's Group and Campbell's Island, Antarctic Ocean; covering large tracts of ground with its ample and shining green foliage. *Hombroun and Jacquinot; J. D. Hooker.*

An excellent representation of an umbel of this remarkable plant, is given in the work above quoted of Hombroun and Jacquinot; and the species is fully described in the "Botany of the Antarctic Voyage;" where I had promised, in the forthcoming Volume (Eighth) of the *ICONES PLANTARUM*, to give a Plate of the analysis of the flower and fruit.* It now only remains to refer to the accompanying figures which were drawn on the spot from the recent plant. *J. D. H.*

Fig. 1. Young perfect flower and pedicel. *f. 2.* Ovary of the same, the petals removed. *f. 3.* Stamen. *f. 4.* Female flower. *f. 5.* portion of the ovary cut through vertically, to show the position of the ovule. *f. 6.* Transverse section of an ovary. *f. 7.* A ripe fruit. *f. 8.* The same, cut through transversely. *f. 9.* Dorsal view of a seed. *f. 10.* Seed, cut through vertically. *f. 11.* Embryo:—all more or less *magnified*.

* In the Botany of the Antarctic Voyage, p. 20, where the reference to this Plate is given, for "TAB. DCCI." read TAB. DCCXLVII.



TAB. DCCXLVIII.

LEPTOTHECA SPECIOSA. Hook. et Wils.

Caule erecto subramoso, foliis patentibus subsecundis ovato-lanceolatis marginatis serratis evanidinerviis, capsula erecta oblonga, operculo conico-subulato.

HAB. Maracaybo, in moist woods on the mountains. *W. Purdie*, Sept. 1844.

Planta spectabilis, dioica. *Caulis* uncialis, innovando ramosus. *Folia* dissita, patula, subacuminata, inferne margine reflexa, siccitate torta, saturate viridia, nervo infra apicem evanido, areolis elongato-hexagonis majusculis. *Seta* sesquiuncialis, rubra, subflexuosa. *Capsula* subcylindrica, magna, basi apiceque attenuata, pallide brunnea, ore rubro. *Annulus* revolutibilis. *Peristomii* externi dentes longissimi angustissimi, vix trabeculati, rubri: interni membrana brevis flava, processibus irregularibus brevibus instructa. *Operculum* capsula dimidio brevius, erectum, rubrum. *Calyptra* subulata, torta, luteola.

A larger species than *L. Gaudichaudii*, Schwaegr., differing essentially in the serrated margined leaves, of a different texture, and the nerve ceasing below the apex. In the inner peristome it approaches very near to *Brachymenium*. The cellules of the leaves contain a loose, oblong body, probably the dried mass of chromule. The male flowers we have not seen.

TAB. DCCXLVIII. Plants; *nat. size*. *Fig.* 1, 2. Leaves; *magnified*. *f.* 3. Apex of ditto; more *magnified*. *f.* 4. Small perichæatial leaves. *f.* 5. Vaginula. *f.* 6. Capsule, operculum and calyptra. *f.* 7. Capsule, peristome, and annulus. *f.* 8, 9. Outer and inner view of portions of the peristome:—all *magnified*.



TAB. DCCXLIX.

POLYPODIUM (EUPOLYPODIUM) ONUSTUM. *Hook.*

Caudice repente ramoso dense squamoso, fronde ovato-acuminata coriacea bipinnata, rachi subulata, foliolis lato-lanceolatis basi cuneatis acutis inciso-pinnatifidis lævibus glabris, segmentis brevibus ovatis acutis, stipite rachibus nervisque primariis subsquamosis, soris copiosis subrotundis dorso venæ secundariæ insertis.

HAB. Andes of Quito. *Prof. W. Jameson. n. 74.*

In its rigid coriaceous texture and size, and general habit, the present species is allied to *P. Murorum*, Hook. at TAB. LXX. of this Work; but the frond is broader, and much more divided, so as to be constantly bipinnatifid (or almost bipinnate) with the segments again pinnatifid and entire, or incised. Here, too, the sori are very large, distinct, very numerous, not confluent. The veins are immersed, but prominent; and the principal ones (or secondary and tertiary rachides) bear scattered, appressed, brown scales.

Fig. 1. Pinnule, with sori:—*magnified.*



TAB. DCCL.

BACCHARIS (§ DISTICHA) FERRUGINEA. Pers.

Ramosissima, ramis pinnatis seu subdichotome distichis, foliis arcte bifariam imbricatis ovatis complicato-carinatis subfalcatis acutiusculis subtumidis nitidis, intus basique externe dense lanatis, capitulis solitariis terminalibus vix exsertis, involucri squamis lineari-oblongis subcoloratis radiantibus receptaculo squamoso.

Baccharis ferruginea. Pers. *Syn. Pl.* 2, p. 425. *De Cand. Prodr.* 5, p. 426 (*excl. syn. β. Thyopsis*).

B. cataphracta. Spreng. *Syst. Veget.* 3, p. 462?

Molina ferruginea. Ruiz et Pav. *Syst.* p. 211.

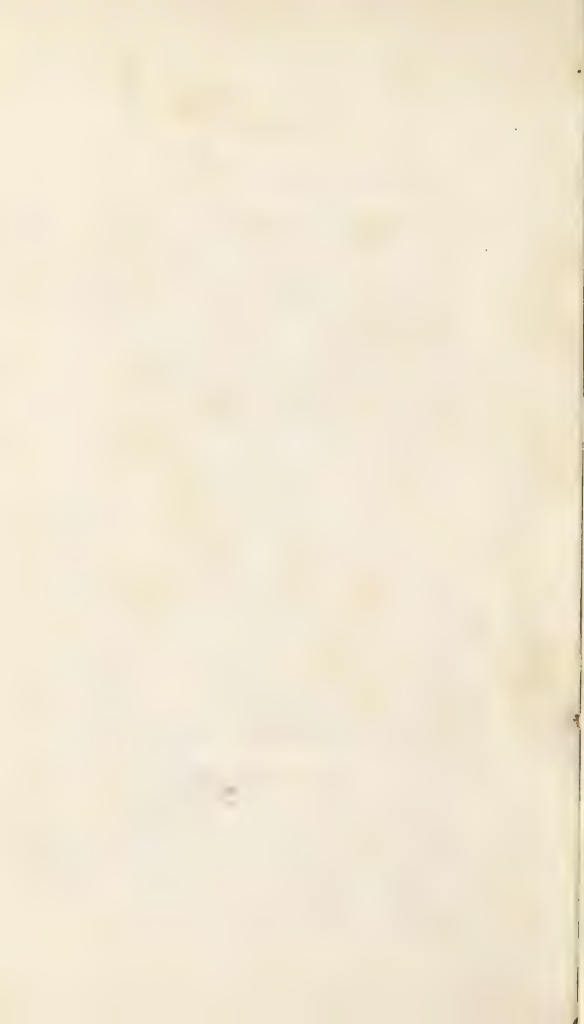
HAB. Andes of Peru; Ruiz and Pavon. Eastern Cordillera of Quito, near the snow limit, 15,000 feet elev.; Prof. W. Jameson, n. 97. Columbia; Hartweg, n. 1114.

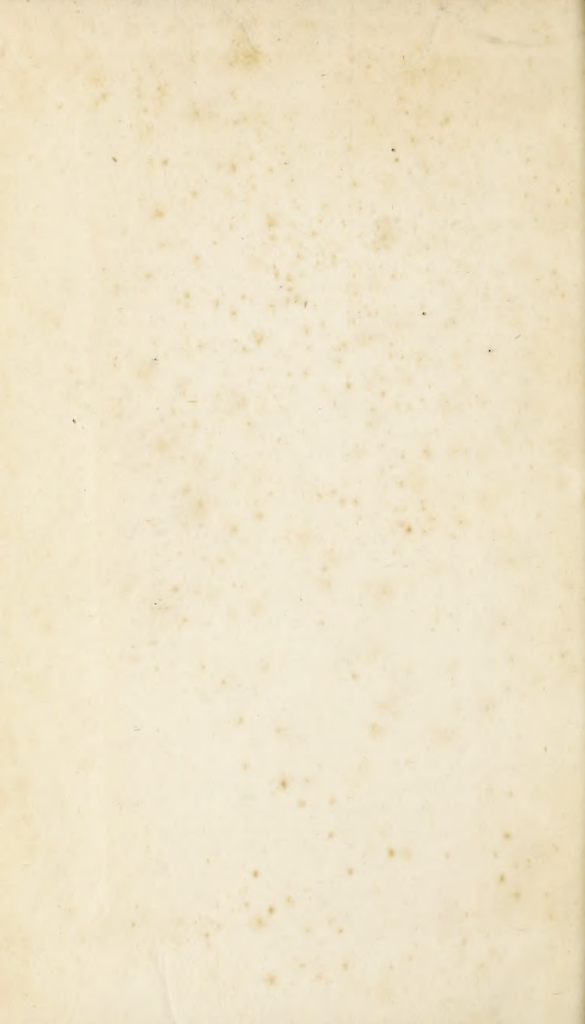
This species is well named *ferruginea* by Ruiz and Pavon. The leaves in the dried state, at least, are of a deep rusty brown colour, glossy, and often as if varnished. It is very different from *B. thyoides*, figured in our Bot. Miscell. t. 94, and still more from our *B. Scolopendra* (IC. PLANT. TAB. LXVIII.) De Candolle had not seen the plant, otherwise he could not have said, “valde affinis *B. thyoidi*”; he judged from a specimen of *B. thyoides*” received from M. Bonpland, and which he made a var. of *B. ferruginea*.

A fourth species is in my Herbarium, having an olivaceo-ferruginous tint; but differing from *B. ferruginea* in the much smaller, less imbricated, straighter, and more tumid leaves, giving a sort of moniliform appearance to the branches. I propose to call it:

B. monilifera, Hook.; ramis pinnatis subgracilibus distichis, foliis laxè imbricatis remotiusculis bifariis patentibus rectis ovatis complicatis tumidis (non carinatis) opacis intus dorsoque ad basin lanatis, capitulis terminalibus solitariis vix exsertis, involucri squamis lineari-oblongis subcoloratis, receptaculo paleaceo.

HAB. Mountains near Cuenca, El Equador, elev. 14,000 feet. Prof. W. Jameson.







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